

# Electronics Application On Automation Of Administration and Accounting Sector

AAPPMS

(Automation of Administration and  
Personal Performance Management  
System

Licensed Software Model



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## About "AAPPMS"

The product, "**AAPPMS**" was designed to fulfil all the needs of "Government" organization with various individual packages merged into one big product, "**AAPPMS**".

"**AAPPMS**", application is a set of Packages and utilities that cater to the needs of the Government Administration Organisation. It comprises of:

- Payroll.
- Budget Management System.
- Human Resource Management System.
- Personal Information System.
- File Monitoring.
- Grievance Management System.
- Co-operative Management System.
- Motor Transport Organization.
- Arms & Ammunition Management
- Duty/Attendance Management
- User access and application control management

### 1.1 "AAPPMS" (Online Information System)

"**AAPPMS**", is a powerful, efficient, easy to use set of Software Packages on Automation of Government Office Procedures. With an approach towards the Paperless office, the application transforms the Government Administration Units as Cyber Unit. It is a total integration of A-B-P (Administration-Budget-Pay) sections of Unit and there by maintains the Digital Service Book of Government Employees.



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Some of the basic objectives of the "AAPPMS" are:

- Transparency in Office Work.
- On-line accessing of Personal Information.
- Digitisation of the Service Records with links to various Packages/Modules.
- Easy and automatic updating of Service Records.
- Effective Time and Task Management.
- Authenticity of System Utilization.
- Easy Monitoring of pending Work.
- Seamless integration between sections lowering the delay.
- Minimizing routine manual Operations, drastically reducing the time required to complete the process.
- Fast redressal of Grievances.
- Instantly brings up the complete history of any employee as and when required
- Data highly secured as only authorized personnel can view the data.
- Large amount of older data can be preserved in archives and yet it takes less space unlike the manual file management system
- Easy Portability of Data.
- Department-wise search and reporting

With the emphasis in minimization of usage of paper and time management, the Government Organisation successful in carrying out their activities effortlessly and promptly such as

- Reduction in response time to Grievance Redressal.
- Effective utilization of Human Recourses.
- Cost Effective office administration.
- Easy maintenance with low recurring costs.
- Rational management of Trainings, Transfers.
- Easy monitoring of Probation declarations, seniority list preparations and Promotions etc.
- Rational planning of Leaves, Increment sanctions, Loans etc.
- Easy monitoring of skills, Trainings, and Certification along with Promotion, Postings, Rewards and Punishments for every employee.
- Effortless review of work pendency in all sections of the unit.
- Automatic updating of Service Records
- Monetary savings such as – Warrants, Office records maintenance etc.
- Rationalization of existing man power.

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## Main Features

### 2.1 Pay

This package does Automatic updating of Pay-Scales, Annual & Special Grade Increments, Basic Pay Fixation, DA, HRA, IR, Agency Allowance and Etc., GPF, CPS, APGLI, GIS,PT, and Govt, Non Govt. Loan recovery, Insurance, Co-operative & Postal Recurring Deposits, effect of punishments on the increments/basic etc.

Deductions in the salary are tracked so as to give the administrators the facility to decide if they can allow any further deductions. However, this will vary from department to department and this can be changed using settings.

Calculations are automated to give maximum accuracy in pay calculations. The salary slips for any month can be retrieved and printed. Retirement and terminations are also tracked automatically within the system, hence avoiding unnecessary payment to such employees. The system also prepares the day wise calculations for employees based on punishments or suspension, overtime, long leave or hospitalization and are tracked within the system automatically. For example, the suspended employee will get only half of the basic. The system takes care of such calculations automatically.

A digital Long Roll is created and an innovative Payslip furnishes all the data to the employees.

### 2.2 Budget

Beginning from allotment of yearly budget, head-wise or account-wise and to the generation of balance sheets to the user requirements is the main function of the budget module. The General Cash Book, Subscriber Cash Book, Daily Transaction Logs are digitally maintained. This module aids you in formulating budget estimates, and its utilization in a scientific and planned way.

Maintaining a working budget is a herculean task, but nonprofits are especially vulnerable to the potential pitfalls of budget management. Revenue sources must be carefully tracked against existing and future operating and capital expenses. Without budget management module, organizations run the risk of overlooking vital details that could seriously damage the organization and put important work in jeopardy. This module is integrated with approval workflow, where certain set of predefined users are allowed to make approvals of actions or reject for need of any modification.



## 2.3 Human Resource Management System (Administration)

The package helps in rational distribution of men, recruitments, trainings, transfers etc. It gives unit-wise details of allotted and actual strength. Information management is a basic function of any HR department. This module keeps track of employees service record.

- Employee general information, photo, note attachment files, medical information, tax information, and medical insurance and emergency contacts
- Employee benefits form helps you record all medical and detail insurance programs that the company has for employees.
- Employees retirement dates and dues are also tracked with this system.
- Create HR payroll report, phone list, employee list, department list reports, and many other reports.
- Employee vacation and sick leave management, EL surrender and encashment
- Employee job history information management
- Employee certification/rewards mgmt, resume/training records management
- Create Employee Performance Review Forms and store these records
- Manage and update employee contact and travel information.
- Manage employee job information by defining pay grade, salary etc.
- Identify reporting structure by defining employee supervisors and workflow.
- Track of past work experience, educational details, skills and other criteria.
- Tracking deductions or special pay, Seniority, Increments, Transfers, etc.
- View and search employee details when needed.
- Generate customized employee reports.

Notifications to trainings, transfers, promotions, increments, and various reports of personnel are generated on the basis of rank, qualifications, skills, age, service details and many other criteria, which are just a mouse click away.

## 2.4 Personal Information Management System

This package is aimed at helping an employee to access his information at anytime and from anywhere as web apps (Desktop, Laptop, I Pad, Tablet, Mobiles and other communication devices) thus improving his morale and eliminating corruption. It furnishes the following information at the swish of a card:

- View Personal and Family Details
- Increment & Pay Fixation Details
- Postings & Promotion Details
- Monthly Pay Details and history of payments made
- Leave Balance Details and Leaves History
- Reward and Punishment Details
- Bank Account details, Fixed Deposits or Recurring deposits, insurance details



## 2.5 File Monitoring System

Maintaining the track of Inward and Outward movement of files, Status of a file- where, with whom, why and from when it is pending (This is very useful for supervisor, to check pending central wise, department-wise, section-wise, unit-wise), its progress over a period of time and automatic allotment of current number are the basic utilities of this package. The file is closed automatically when this goes to outward.

- Create/ Edit petition or application
- Fetch petition status
- Cancel petition
- Tracking incoming / outgoing petitions
- Stage-wise or section wise approval status

## 2.6 Grievance Management System

This package helps in Fast redressal of grievances like leaves, loan applications, appeal petitions, etc. It is observed that a leave application generally takes a week's time to be disposed off while the loan application is disposed off generally in a fortnight due to various factors like clerical inefficiency, non availability of the data, etc. These abnormal delay demoralises an individual working in the field. This module enables us to process and dispose off any grievance petition within few minutes boosting the morale of the main in the field.

- To enable the employee to express their grievances without fear
- To obtain, where possible, a speedy resolution to the problem
- To take appropriate actions and ensure that promises are kept
- To inform the employee of their right to take the grievance to the next stage of the procedure, in the event of an unsuccessful resolution
- Download grievance statistics in the form of reports.
- Keeps a check on the supervisors attitude and behaviour towards their subordinates and outsiders as well.
- It prevents minor disareements to develop into major disputes.
- Saves a lot of time and money for the employerand helps in improving or maintaining productivity

## 2.7 Co- Operative Management System

This is a financial management system that helps the employee with the all-round development of the organization. Membership details, maintenance of Thrift Fund, Management of Shares, monthly transactions, Deposits, Loans, interest amount details, pay deductions are the critical information maintained digitally at a mouse click away.

- Enrol new members
- Can track new loan requests, pending loan amounts. Etc.
- Can generate reports to suit the needs of the management body, like funds status, loans statement, pending dues from members



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## 2.8. Motor Transport Organization

Transportation Management Software gives you the tools to streamline vehicle management processes and increase efficiency in allocating vehicles to employees even in case of an emergency also and to maintain the expenses within the yearly budget allocated. This software automates workflows, integrates company rule sets, and creates end-to-end traceability to:

- Reduce transportation costs
- Increase location accuracy and reduce delays in travelling
- Increase efficiency in assigning and reassigning resources to posts.
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## 2.9. Arms & Ammunition Management

The Arms and Ammunitions module is used by employees of who are on the field guarding facilities or providing security cover for senior officers. This module contains the following major features:-

- Issue of weapons based on the license
- Workflow integration to seek and view approvals for weapon and ammunition
- Ammunition and spare parts stocking and management
- Issuing spare parts
- Tracking license validity or revocation/ cancellation
- Tracking retirements and suspensions for surrendering weapons and ammunition

## 2.10. Duty / Attendance Management

Duty management module allows an officer to post the employees to certain location on a daily or weekly basis. The officer can cancel the posting of an employee to a location and reassign another employee to that location.

The officer can generate a report to view all the locations where the employees are posted to find out if any location is left unassigned, so the officer can assign an employee.

The officer can move the resources from thier current posting to any other location depending on the need of the hour. This module tracks how many hours was an employee on duty at that post.

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## Auxiliary Features

### 3.1 Pay

Pay package includes the following supporting and important modules.

#### 3.1.1 Increments

Regular Increments, Special Increments such as SPP-I/ SPP-II/ SPP-III are automatically updated through this module. D.O (District Order) to the extent of updated increments is automatically generated through this module. Manual postponements, verifications and generation of reports are included as the most common feature of the module any update to this module will reflect in the budget allocated.

All the employees who are given increment, should be able to view the new salary details based on the increment. The same must reflect in the Arrears screen also. Any reports generated for the employees salaries and thier designations should reflect the new changed details.

#### 3.1.2 Loans

Keeps track of any Government and Non-government loan details, Sanction of Loans, Eligibility to sanction suck loan, Amount sanctioned, their deductions, schedules/reports etc are the key information of this module. The Officer can further sanction a new loan in a rational manner through the information (eligibility for sanction of loan) drawn from this module.

This module helps in defining Loans, Advances and the corresponding repayment structures and also approvals with integrated workflow. Automatic deduction of loan installments from payroll. This module also helps in tracking third-party loans along with interest details and repayment schedules. If there are any kind of deductions this should reflect in the payslip and salary details. Any loan that is completed is also reflected automatically in this module.

#### 3.1.3 Recoveries

Various Government and Non-government recoveries, their schedules, irregularities (if any) are automatically drawn from this module. Apart from these basic modules, pay package has the portability, which helps the organization to convert any existing data bases (in any format) into "AAPPMS" to keep the minimum initial data entries (which is normally called as "Master Data").

#### 3.1.4 Reports

A powerful/multi-featured reports are generated through this application. The wide range of reports that start from Checklist, Paybills to Government and non-government abstracts as per the standard formats can be generated at finger tips. These can be organized on any data item such as Employee Code, General Number, Name, Rank & General Number, Account Number, Bank Name, and Net Pay. The reports can also be classified based on GO's. For the employees convenience this data can be downloaded as an excel sheet or as a pdf file, dependending on the need. Alternatively, a print command is provided to print the data directly. These reports are capable in handling large chunks of data.



### 3.1.5 Arrears (DA/HRA etc)

Calculation of Arrears is a tedious process in manual system as it involves lots of calculations and verification of employee data during the entire period of arrears. This activity is made very simple through this application, as the data is readily available. What is required here is to just input the duration and the new DA/HRA etc values to calculate the arrears. Any changes to the salaries will be reflected in this Arrears section automatically. And also reflect in the reports generated.

### 3.1.6 Income Tax

This module helps the employees declare the total annual income and savings made in that year. Calculation of taxes to be deducted shall be taken from this declaration and calculate automatically. Form-16 to be given by the employer through Form-A can be calculated automatically with "AAPPMS". This feature makes it easier to file the returns and also to deduct the IT from the employee pay. Any changes to the salaries directly or indirectly will reflect here in the form of taxable income and deductions.

### 3.1.7 Surrender of EOL (Extra Ordinary Leave)

On giving the option, surrender of EOL can be automatically calculated. Number of days will be automatically generated through this application. Hence, the calculation based on the current monthly salary, will become easier. Powerful reports are the supportive function for each of these activities, like list of employees that have EOL as per a fixed DO and are eligible for surrendering.

### 3.1.8 RPS arrears

Calculation of arrears during the Revision of Pay Scales is done easily through this application. Fixation of Pay with the New Master Pay Scale is an added advantage of this application. This is not an error prone process as it is completely automated.

### 3.1.9 Insurance

This is another important employee-based finance management system. It maintains insurance policy details, maturity value, maturity date, risk benefits, beneficiary details. Keeps track of payments and generates required schedules/reports. If the employee has decided to pay the amount through his employer then this amount will reflect in the salary deductions.

Tracking employees Insurance details helps to save employee's corporate insurance information in a secured way. An employee can view or edit or add only his insurance details and cannot see any other employees insurance details. This application is designed to track employees benefits which includes Health Insurance (individual & family), Life Insurance, Vehicle Insurance and Accidental Insurance.

### 3.1.10 PRD

Postal Recurring Deposits (RD) – deductions and generation of reports are automated through this module. Employee dues, payments, amount deposited as on a given date, maturity date etc., will certainly help the employees in planned monitoring of their finances.



## 3.2 Budget

### 3.2.1 FC Details

Spreadsheet-based financial consolidation is not just error-prone, frustrating, and slow; it's obsolete. Instead of chasing dead links and busted macros, the Budget Maestro consolidation process keeps you focused on results, no matter how many entities, locations or products you may have.

One of most important financial module is Budget Module. This module has lot of information processing starting from the allotment of budgets on head of account wise to generation of balance sheets. Full fledged reports can be generated from this module based on the head-wise, FC details, and within a specified date range.

When creating budget in Budget module, you simply create "views" – by account, entity or activity. For example, you may have an entity view that trees down into units, then departments, programs, etc.

Consolidation is automatic, that is when you make a change in one view and it automatically reflects in other areas. There's no need to verify whether a last-minute update in one department's spreadsheet, a merger, or other change has been incorporated in the overall budget. Budget module allows:

- Consolidation of data quickly from multiple general ledgers
- Consolidation of data from various business perspectives and by multiple structure versions (this year, last year, proposed)
- Easy addition of new sections/ departments to reorganize departments
- Carry out automated adjustments including minority, recurring, etc.

### 3.2.2 GCB (General Cash Book)

One of the important features of this module is, if a payment is booked under a certain head, then the payment is temporarily shown under the expenses to be incurred and it gets transferred to actual expenditure only after it gets passed from the Treasury. While it is under pending with the treasury, if the officer wants to check the actual expenditures under this head, the current expenditure is not shown as expenditure and the balance is calculated accordingly

### 3.2.3 SCB (Subscriber Cash Book)

It is possible to get various reports from this modules to name a few – Head-wise details to budget allotments. Head-wise balances, the details of expenditure incurred as on date again head-wise, day-wise cash book entries.

### 3.2.4 Proceedings

It maintains the GCB (General Cash Book) details and also the SCB details to cater the full need of the office. This process is completed automated and there by error free data / reports are generated with less effort.

### 3.2.5 TA Bills

TA Bill management is another major activity in this part of the Budget module. TA Warrant bills, Advances, Pocket money details are maintained effortlessly. The required reports and effect to the pay to that extent is carryout out automatically.



### 3.2.6 POL bills

POL bills – the MT section is the heart of activity is maintained perpetually with this system. The up-to date activities and reports are generated effortlessly.

### 3.2.7 Other bills

Quarter Allotment, Electricity bills, Telephone bills like many other required bills are automatically maintained with this AAPPMS seamlessly.

## 3.3 Human Resource Management System

Human Resource Management System – One of the important tool of "AAPPMS" – useful to the officer in his human resource management and consists of the following modules.

While tracking the skills, trainings, certifications, strengths, and qualification and experience of each employee, to make sure resources are utilized properly as and when needed more appropriately, this helps in deploying skilled resources to specialized zones or tasks where resources are not available.

### 3.3.1 Personal Details

This module contains lot of personal information of the employees. It captures the employees date of birth, skills, address, languages known, identification marks on the body, blood group, contact details, aadhar card, voterid, PAN card, family details, his educational details, latest photograph, any special courses, his bank and insurance details, etc. This information is useful in occasions such as LTCs, finalization of insurances with the help of dependents details, allotment of works depending on the skills/ certifications/ educational qualifications of the employees, increments and promotions, etc.

### 3.3.2 Strength Particulars

This module is used to track special strengths of the employees. Like special training on how to use weapons, expert swimmer, fire fighting expert, technology, etc.

This module is useful to know the strength particulars of the region wise, range wise and unit on rank-wise basis, posting or place-wise etc. The figures of allotted, actual and vacancy/ excess are known from this module. This also helps to re-arrange the staff pattern, transfers, trainings, special duties etc.

### 3.3.3 Trainings

Trainings has become mandatory in most organizations and this is considered during appraisals and promotions. This module is used to view the list of trainings an employee has already undergone and also the trainings that the employee is yet to complete. It is just a click away for decision makers and there is a report also for viewing all the trainings completed and pending employee wise.

This module takes care of various training location details, and the trainings offered at these centers. The training details of employees are also filled in this module to help the officers to nominate for new/ fresh trainings. The details can be had on various categories such as rank-wise, educational qualifications-wise, skills-wise, place-of-working-wise, service-wise, age-wise, category-wise and many other combinations.



### 3.3.4 Rewards

To maintain an honest administration, this module helps proves to be handy. It maintains a database of various rewards-such as Good service entry, Cash rewards, Uttama Seva Pathakam, Mahonnatha Seva Pathakam, Mukyamanthri Sourya Pathakam, Medal for distinguished Service, Medal for Meritorious Service, Life Saving Medal and other Govt medals, Commendation Letter etc – which can be awarded to the force as a distinguished service of the employee. This module maintains a link to pay module and automatic monitory benefits are added to the employee's pay and corruption can easily be eliminated.

### 3.3.5 Transfers

The manual operations / corruption / favourism that exist in present system can be eliminated. As the service history is digitized through "AAPPMS", at the time of transfers this information plays a vital role in rational distribution of the men based on the various features of the employees. The features such as service-history, previous-places of working, educational-qualifications, skills and other qualities will provide a wide range of reports based on which the officers can make an easy and timely decisions.

### 3.3.6 Leaves

To make a good, rational and timely decision in sanction of leaves, this module helps a lot. Allows the administrators to define new leave types and also set the number of leaves. The leaves can be sanctioned based on the existing force and related work, earlier leave balances, eligibility for new leaves etc. Different categories of leaves are sanctioned through this module. Automatic updating is another basic feature of this module. If an employee has applied for a leave and the same has been approved, the leaves count is automatically updated. As said earlier the time and manual procedures in sanction of leaves can be eliminated.

### 3.3.7 Punishments

This module also plays a vital role in making critical decisions of the employee as the organization is named for the discipline and in maintaining the discipline lot of punishments are forced to be given to the employees. This module also maintains a database of various punishments such as – Censure, Suspension, PPI with and without effect, RTSP with and without effect, R education in Rank, RTSP minimum pay scale, Removal from Service, Dismissal from Service, Withholding of Promotion, Recorded Warning, LWP, Compulsory retirement etc. The new punishments can be added / modified to the Punishments master.

This module has an internal link to automatically update various other modules when a punishment is imposed on an employee. The automatic updating such as postponement of increment(s) when a punishment is awarded and resetting back the increment(s) when the punishment is set-a-side.

This module even has the facility not only to award the punishment but also the facility of appeal, appeal stage, appeals confirmation or declining the appeal etc. When a punishment is imposed on an employee or a group of employees an automatic DO can also be generated through this module here by the manual work can be reduced.

The employer can impose a punishment to an employee sometimes based on this service record, personal record, skills, trainings, working places etc. Therefore the information encoded here is also as important as many other information o the AAPPMS.



### 3.3.8 Promotions

This is one more Decision Support System of AAPPMS and helps the officer in making a rationalized decision while promoting his employees. This module contains the information of employees on their seniority of service through the maintenance of seniority Lists. These lists are automatically generated through this modules based on the various information contained in the package. This module also maintains the details of courses / trainings undergone by the employees which play a vital role in supporting the decision of the officer while promoting the employees.

It maintains the database of promotion tests, Refresher Course Details and Probation decelerations if an employee is punished during the period of probation, and then the system automatically postpones the decelerations of probation and accordingly the promotions in due course of his employment.

This module generates various reports of the employees to be promoted, list of employees who underwent the promotion tests, Refresher Course details, Seniority lists and also the Out of Seniority List for special promotions if any. Therefore it is claimed as a tool of the officers, which helps in making a rationalized decision during the promotions.

### 3.4 Personal Information Management (PIM) System

PIM helps employees to view and update personal information relating to just that employee. This module allows the employee to:

- View his upcoming trainings assigned by his officers
- Select himself for a training and schedule the same
- View/ edit or add his personal details like trainings, certificates, print salary slips, family details, insurance details, health details
- View only his loans and the schedules, salary details (along with deductions),
- View insurance details along with their expiry dates.
- View reminders generated for the due/ expiry dates

### 3.5 File Monitoring

#### 3.5.1 File Monitoring System

This is another very useful handy tool to the officers for easy monitoring of work progress and the pending status. This module maintains the track of Inward and Outward movement of files in different sections/ office. One can easily trace the status of a given file and its progress over a period of time. By this module the office can understand the pending work at a given section in his office.

There is a search facility associated with which the staff/supervisor can search for a particular file and know the status immediately. The supervisor of the section can also monitor the progress and check at which desk the file is withheld for more time. This will reduce the time taken to approve and forward the files. By analyzing the staff pattern with respect to the work pattern, administrative changes in the sections can be made.

All files that are received will be entered into the inwards. All files that are to be sent out of the section/ office are entered in the outward and can be tracked on a daily basis. The inward entry will automatically show in the screens of the person to whom this file is posted.

The reports which can be drawn from this module show the pendency status on daily /weekly/ monthly or given period basis. The officer can know the pendency of the files that come from the Head Office, IG office and other offices on institution-wise. He can also get the status of the files that are sent from this office to various officers/institutions over a period of time. The daily transactions of inward and outward provide the useful information of movement of files across different offices to the officer.



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### 3.6. Greivance Monitoring System:

Grievance monitoring is part and parcel of the administration. Administration cannot claim to be accountable, responsive and user-friendly unless it has established an efficient and effective grievance redress mechanism.

A Grievance is first received by the Grievance Cell from various channels. The status of a newly received Grievance is "New". The Grievance Cell staff creates an entry in the system and allocate the Grievance to the correct department. An identification number is automatically generated for tracking purposes.

The System automatically sends a notification to the appointed person in the Department as well as to the employee indicating that their Grievance has been forwarded to the respective department. The person handling the Grievance sets the status to In-Process when he/she starts working on the Grievance.

If the Grievance is not completed within the stipulated time, it automatically Escalates to the Department Head, or Commissioner based on a pre-defined workflow process. At all times, the employee is notified of the Progress and can also monitor the status.

Once the grievance is resolved, it is closed and another notification is sent to the employee that the grievance is closed. This completes the process.

### 3.7. Co-operative Management System (CMS)

CMS is an autonomous association of employees who voluntarily cooperate for their mutual, social, and economic benefit. It is a non-profit community that is owned and managed by the employees who use its services. It is controlled by its members.

With this module an employee can:

- View his contributions to the cooperative association,
- Request for a loan,
- View his loan details like loan schedule, monthly deductions, pending amount and duration.

The management body can:

- View how much thrift fund is available,
- Register a new employee as a member into the cooperative system
- View what are the dues to be collected and how much amount,
- View what are the future payments to be received,
- Generate reports to fetch the thrift fund or loans status.

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### 3.8. Motor Transport Organization

This department will provide vehicles to eligible employees within the unit and also track them. All the vehicles at the disposal of the unit are either owned or are rented. However, the total yearly expenditure is budgeted and the expenses on the vehicles must not cross the budget at any time. This module helps in tracking all such information.

For the department owned vehicles, the registration numbers, the purchase dates, the service due dates, the employee to whom the vehicle has been assigned will be tracked. The destinations of the vehicle are also tracked on a daily basis along with the distance travelled/ covered. The fuel expenses and other expenses on the vehicle are also tracked to keep track of the sanctioned budget limits.

For the rented vehicles, the department can track the owners and the time period of the contract for renting the vehicles. Each vehicle will have a separate rate which is maintained by this module.

There are scheduled downtimes for the vehicles and the department employees can take a report of the schedules. During the schedules, alternate vehicles may be required. For this reason, the department can allocate a temporary vehicle for such a case. All such details are tracked within this module.

For every vehicle, a separate driver is assigned. Such details are tracked within the application and the leaves applied for by these drivers are tracked so as to make alternate arrangements. There are reports based on the driver name, which show the duration he has served for each person, any punishments or rewards, accidents record etc. can be viewed.

There are different reports that can be generated, based on the vehicle, or the employee to whom the vehicle is assigned, a report to view the expenses by vehicle, service due dates. A report is generated to show which vehicle is idle for a period between two dates ( the employee to whom the vehicle is assigned is either on leave or is out of station on duty).

### 3.9. Arms and Ammunitions Monitoring System

The Arms and Ammunitions module is used by different state institutions like: police stations, border posts, public security institutions, various state commissions, etc.

Each employee is trained in weaponry. Based on the results of the training the employee is assigned a weapon to be used under certain circumstances. All such weapons are recorded and tracked by this module along with information like issue date, issued by reason, pre-approvals (from appropriate higher officers), etc. An employee who has been suspended or is retired will have to surrender the service weapon along with any unused ammunition.

Every weapon that is used may change hands during reassignments or transfers. This module stores and tracks such history to be viewed later.

Each weapon needs ammunition, which is also maintained as ammunition store. Every person needing ammunition must give reason and pre-approvals (from appropriate higher officers) at the store to get ammunition. Also the ammunition that is used has to be accounted for before getting fresh ammunition. The date and time of issue, the quantity of ammunition issued, ammunition issued to which person, the make and type of weapon etc. are tracked.

The ammunition store keeps stock of weapon spare parts. Each spare part is issued on surrender of the old spare part. The store admins can get the list of spare parts within the store and can also view the quantity in stock, so that the store admin can raise an indent for supply of more ammunition and spare parts.



### 3.10. Duty/ Attendance Management

Duty management module allows an officer to post the employees to certain location on a daily or weekly basis. This module allows the officer to:

- Cancel the posting of an employee to a location and reassign another employee to that location.
- Generate report to view all the locations where the employees are posted to find out if any location is left unassigned, so the officer can assign an employee.
- Move the resources from their current posting to any other location depending on the need of the hour.
- Tracks how many hours an employee was on duty at that post.
- View the leaves applied by the employees so that he can resuffle the duties.
- Can record if the employees are carrying any weapons to that posting
- Generate a report of employees carrying weapons and ammunition at that location

### 3.11. User and Access Control Management

The system is being built with set of pre-defined features to meet the expectations and requirements of all the stakeholders. Each of the users has a role to be played when using the system. To that extent each user is permitted to access only certain features. Based on the role the user is also restricted from either adding or modifying or deleting in the features that they have been granted access to.

The user access is controlled by assigning the users to different groups and roles. The reason for doing this kind of separation is to avoid duplicate work. Once a group is created with a role and a set of permissions on predefined features, every user that has to execute similar kind of activities can be assigned to this group. In this way we avoid error and repetitive work.

This not only makes administrative tasks easy, infact it provides the application with a robust security control and bars all general public from accessing this application and also prevents them from accessing sensitive data at all times.

#### 3.8.1. Group

A Group is defined as a set of users who execute similar kinds of tasks with same set of permissions. Groups can be used to organize users, thus simplifying administration. Security groups allow you to assign the same security permissions to a large number of users, such as employees in a single department or in a single location, ensuring that security permissions are consistent across all members of a group.

For example, department level administrators are grouped together to form one group called "Dept Admin". The permissions are assigned to this group with the help of role.

#### 3.8.2. Role

A role is a set of groups executing the same permissions. A particular role can only use certain features, this is restricted by assigning modules to every role created.

A role is essentially a set of permissions that grant access to actions and resources in the system. These permissions are attached to the role, not to user or group. Roles can be used by user in the same account as the role or a different account.



### 3.8.3. Modules

Modules are sections within the application which has similar kinds of features bundled together for convenience sake. Any user has to work on only one or few modules. By assigning the modules to the role the users can work only on the permitted sections or modules of the application

### 3.8.4. Permissions

A permission is authorization to perform an operation on a specific feature or part of the application. Permissions are granted by privileged administrators. Permissions provide the users/ groups with the ability to use the sections of application. For example, view, edit/ modify, delete, configuration, etc.

You can control permissions for new users created by setting inheritable permissions on the roles. The permissions that are set on a feature are inherited by existing users in the group, as well as by newly created users.

When permission to perform an operation is not granted, it is implicitly denied. Permissions can also be explicitly denied.

### 3.8.5. Mappings

Mappings are a facility within the application using which we can assign new permissions or features as and when required. The same facility can be used to remove the permissions or features. Mappings have to be planned ahead so that duplicate creation of groups and roles can be avoided and effectively be managed within the system so that there are no leaks or loop holes.

Nesting groups, can reduce the number of permissions that need to be assigned to users or groups individually. As you assign users to groups to apply security settings based on a user's job or unit, you can nest the groups into the Users and groups, and in this way apply the security settings that are inherent to Users to the members of the global groups contained within them.

Wealth Zone

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