1. **Introduction :**

This is a web based application developed for police bharti. This application provides easy to use interface and keeps track of scores of the candidates and makes it easy to schedule further events. The system will be used by highest authority of police recruitment. System makes the process easy by automating the process of importing the data from excel files.

* 1. **Purpose :**

System is used for recruitment drives of police (police bharti). System automates most of the manual process carried out during the recruitment drives and tries solve the problems faced during the process. The system also has role based authentication to add security layer to it.

* 1. **Scope :**
* District Admin is able to plan events such as written ground and medical tests.
* District Admin is able to authenticate City and Gramin Admins for data entry and verification which are police officers.
* District Admin has the power to remove authentication of users is needed.
* District Admin is able to approve candidates according to the cast reservation.
* District Admin is able to see the verified results of physical and ground tests which are conducted by City and Gramin Admins.
* District Admin is able to see the verified results of written tests which are conducted by City and Gramin Admins.
* District Admin is able to see the verified results of medical tests which are conducted by City and Gramin Admins.
* District Admin is able to view the list of candidates with their combined aggregate marks.
* District Admin Provides the data in of the candidates in excel sheets which gets stored in the database.
* District Admin is able to generate the final reports of the candidates and export them in the excel format.
* Authenticated City and District Admins are able to view the data of the candidates submitted by the Admin.
* City and District Admins are able to authenticate Physical, Written and Medical Admin each for ground, written and medical tests.
* Authenticated Physical Admins conduct the physical (weight & chest) and ground tests of the candidates submitted by the District Admin on scheduled date.
* Authenticated Physical Admins are able to add the scores of the candidates after conducting the tests.
* Physical Admins are able to view the scores and update if necessary with proper comments.
* Authenticated Physical Admins are able to view the reports of the candidates and generate excel file if necessary.
* Authenticated Written Admins are able to view the data submitted by the admin.
* Authenticated Written Admins carry out the written tests.
* Authenticated Written Admins are able to add the scored of the candidates after conducting the written tests.
* Written Test Admins are able to view the results of the candidates and update them if necessary with proper remarks.
* Written Test Admins are able to view the reports of the candidates and export them if necessary.
  1. **Definitions, Acronyms and Abbreviations :**

**ASP**: Active Server Pages

**.Net:** Network Enabled Technologies

**Admin:**

**PSI:** Police sub inspector

**DSP:** Deputy Superintendent of police

* 1. **References :**
  2. **Overview :**

Police bharti portal is a web based application, which can be accessed from different locations. It is used to manage the recruitment drive of police bharti. It is also used to automate the manual process in the recruitment. The main actors in this system are the District Admin, City Admin, Gramin Admin and Physical, Written and Medical Admins.

The District Admin updates the system database with the information of candidates via excel file. District Admin also schedules the dates of the ground, written and medical tests for the later purpose. Later the Physical Admin conducts the physical and ground tests of the valid candidates. The scores of the ground event are later updated in the database by authorized personnel. Before submitting scores are verified and updated if necessary with a proper remarks if necessary. After which Written Admin conducts the written exam on the scheduled date. The scores of the candidates in this exam are updated in the database via authorized peroneal. Before submitting the final scores they verified and updated with proper remarks if necessary. The City/Gramin Admin later Views the combined scores of the candidates and forwards the candidates for medical exam. After which the candidates are selected via the reservation criteria.

1. **Current System :**

Existing system contains a windows based application. Windows based application is easy to use but it contains some flaws. These flaws maybe small but they have a huge impact on the system. The existing system faces the following problems:

* This windows based application has a local database and needs to be updated manually.
* As the windows based application has local database, it runs on local machine.
* The data of physical, ground and written tests which is verified by DSP and PSI on paper sheets which are later added manually in the windows application.
* This verified data can be manipulated easily by someone in the process and it can’t be tracked who manipulated the data.
* No ability to plan future events (such as dates of written tests, medicals etc.)
* The system cannot be used at different locations.
* The proposed system is web based application which maintains a centralized database of all exams / events taken by authorities.
* The informative data / reports can be stored in centralized database which can be maintained by the system and which gives good security to information.

**2.1. Comparison of Existing system:**

|  |  |  |
| --- | --- | --- |
| **Features** | **Proposed System** | **Windows Application** |
| Auto Import Excel Sheet | Yes | Yes |
| Member Log In | Yes | No |
| Manage Users | Yes | No |
| Planning Event Dates | Yes | No |
| Criteria for events | Yes | No |
| Registration of members under City Admin | Yes | No |
| Registration of Members Under Gramin Admin | Yes | No |
| View Reports of Ground tests | Yes | Yes |
| View Reports of written tests | Yes | Yes |
| View Reports of the Medical test | Yes | Yes |
| Reports based on combined results | Yes | Yes |
| Generate Excel sheet Based on reports | Yes | No |
| Search  Specific Candidate | Yes | Yes |
| Role based authentication | Yes | No |

1. **Proposed System :**

The proposed system is a web based application which tries to automate much of the manual work. The candidate data in excel is provided to the system which is stored on the centralized database. This centralized database can be accessed through various locations with role based member authentication. Other noteworthy points are as follows:

* Scheduling the dates of events such as written and ground tests is possible.
* Input the criteria for the selection of candidates.
* System can generate reports based on tests which can be exported in excel format for further viewing.
* Search for a specific candidate records.
* System logs who inserted or updated the data with a comment, which can be further used to verify if there is manipulation and who caused it.
* The application is used by highest authority of police recruitment and there is no interaction of candidate.

**3.1.1 Problem Statement:**

## Problem No. 1

|  |  |
| --- | --- |
| The Problem of | Manage users |
| The impact of which is | Problems in managing users. |
| A successful solution would | Proposed system can provide the easy way to manage the users. |

**Problem No. 2**

|  |  |
| --- | --- |
| The Problem of | Planning Event dates |
| The impact of which is |  |
| A successful solution would | Proposed system can provide the easy way for planning the dates |

**Problem No. 3**

|  |  |
| --- | --- |
| The Problem of | Set the criteria for an event / exam. |
| The impact of which is |  |
| A successful solution would | Proposed system can provide the easy way to set criteria and its points. |

**Problem No. 4**

|  |  |
| --- | --- |
| The Problem of | Registration of users under PSI |
| The impact of which is | For physical and ground test |
| A successful solution would | Proposed system can provide the easy way to register the members for the tests. |

**Problem No. 5**

|  |  |
| --- | --- |
| The Problem of | Registration of users under DSP |
| The impact of which is | For written test |
| A successful solution would | Proposed system can provide the easy way to register the members for the exam |

**Problem No. 6**

|  |  |
| --- | --- |
| The Problem of | Generates sheets based on report |
| The impact of which is | Excel sheet |
| A successful solution would | Proposed system can provide the easy way to generate the excel sheet based on report |

**Problem No. 7**

|  |  |
| --- | --- |
| The Problem of | Comment while updating the records |
| The impact of which is | Manipulation of data |
| A successful solution would | Proposed system can provide the easy way to add a comment while updating any record |

**Problem No. 8**

|  |  |
| --- | --- |
| The Problem of | Role based login |
| The impact of which is | Security of data |
| A successful solution would | Proposed system can provide the easy way to log in based on their role |

**3.1.2 Product Position Statement:**

|  |  |
| --- | --- |
| For | Police bharti Authorities |
| Who | Police bharti Authorities |
| The Police bharti | is a web based system |
| That |  |
| Unlike | Windows based application |
| Our product | Provides features like user maintenance, user access control, report generators (Excel sheet) etc. to the system. |

**3.2 Product Overview:**

**“Police Bharti”** is web based system developed for police requirements. The Admin can put all kind of information about the recruitment process and the dates for the exam / events.

* This web based system also used for manage and schedule the dates.
* This system provides the best security for logins based on their roles.
* Easy and simple User interface
* The proposed system is web based application which maintains a centralized database of all exams / events taken by authorities.

**3.2.1 Product Perspective:**

The **“Police Bharti”** will use the power of technology to help in the recruitment process and save the time of submitting record to higher level authorities.

**3.2.3 Assumptions and Dependencies:**

**Assumptions:-**

1. Member must have valid information, so that the admin can do the registration of the member.
2. Member could login with proper user name and password.

**Dependencies:-**

1. There should be a network connection.
2. Each member has their authentication.

**3.3 Functional Requirement:**

**Number of modules:-**

1. District Admin
2. City Admin
3. Gramin Admin
4. Physical Admin
5. Written Admin
6. Medical Admin
7. District Admin:-

Administrator can add, delete and update member information. Administrator has all the functionality of members. Additionally administrator can deal with member’s information and can deal with task related data.

1. City Admin:-

City Administrator is a police officer. He has the ability to register subordinates under him for Physical, written and medical test. Physical, Written and Medical tests are conducted on the scheduled dates by City Admin.

1. Gramin Admin:-

Gramin Administrator is a police officer. He has the ability to register subordinates under him for Physical, Written and Medical tests. Physical, Written and Medical Tests are conducted on scheduled dates by Gramin Admin.

1. Physical Admin:-

Physical Administrator is a police officer whose registration is done by the City/Gramin Administrator to conduct the Physical and Ground tests on the scheduled dates. The Physical admin conducts the tests and adds the scores of the candidates in the database after verifying them.

1. Written Admin:-

Written Administrator is a police officer whose registration is done by the City/Grain Administrator to Conduct the Written test on the scheduled dates. Written Administrator conducts the test and adds the scored of the candidates to the database after verifying them.

1. Medical Admin:-

Medical Administrator is a police officer whose registration is done by the City/Gramin Administrator to conduct the Medical Tests on the scheduled dates. Medical tests are conducted at the Government Hospital and the results of the candidates are added to the database after verifying them. If the candidate fails in a certain test then he can reappear for medical test and the scores of that candidate are updated in the database.

**3.3.1 Objectives:**

* To develop the system that enables efficient management
* Providing facility to admin to create the multiple members.
* To show the result of every test exam at higher authority side.
* To add the list of candidates.
* To reduce time consumption.
* To provide more security for data
* To provide more security for login based on their role
* To approve the report of every test exam at admin side.
* Providing facility to admin to check every report at any time.
* To Review Scores of the candidates and update if necessary with remarks.

**3.3.2 Feature Set (Critical):**

This is the web based system, developed in ASP.NET using C# technology. It is used for the recruitment process of police.

* This system is web based system.
* As this is a web based application, it can be used on any number of computers connected to the network.
* This application saves the paperwork used to store scores of the candidates.
* It can be easily tracked who updates a specific candidate score or details as it logs the username of the user.
* This system is developed in the .net technology.
* Only the authorized members can use this application

**3.4 Non-functional requirement:**

The development of this new system contains all of the above functional requirements along with following activities:

* Fast Performance and high accuracy.
* Reliability and flexibility.
* The system is Member friendly and self-explanatory.
* The system is available 100% for the Member and is used 24 hours a day and 365 days a year. The system shall be operational 24 hours a day and 7 days a week.

**3.4.2 Stakeholder Summary**

These are the factors affecting the system:

1. Admin: Highest authority of police recruitment.
2. PSI office member: - Member created by admin for physical and ground test exam.
3. DSP office Member: - Member created by admin to conduct the written test exam.

|  |  |  |
| --- | --- | --- |
| **Name** | **Represents** | **Role** |
|  | Highest authority of police recruitment | Controls all the activities of this application. |

**3.4.3 User Summary:**

|  |  |  |
| --- | --- | --- |
| Name | Description | Stakeholder |
| Admin | Highest authority of this system who has the authority of recruitment process | Admin is responsible to create the members for this whole recruitment process.  Also he/she is responsible to assign the roles to the member.  He/she has the authority to manage all members and its responsibilities. |
| PSI | Authority to conduct the physical and ground test and send the overall report to the highest authority for further recruitment process. |  |
| DSP | Authority to conduct the written test exam and send the report to the highest authority for further recruitment process |  |

**3.5 Hardware Considerations:**

**3.5.1 System Requirements**

|  |  |
| --- | --- |
| **Server side** | |
| Processor | 1.6GHz or faster processor |
| RAM | 4 GB |
| Hard Disk | 20 GB of free space |
| **Client side** | |
| Processor | Intel core i3 |
| RAM | 4 GB |
| Hard Disk | 40 GB |
| Other Hardware | Keyboard, Mouse. |

**3.5.2 Environment requirements:**

|  |
| --- |
| **Server side** |
| * Windows 10 (Any Edition). * Visual Studio 2019 (ASP.NET with c#) * MySql. |
| **Client side** |
| * Operating System : Window 10, XP, Vista, Linux * Browser : Internet explorer 6.0 onwards/Mozilla Firefox/ Chrome |