Passport Automation System

1. Objective:

   To develop the passport automation system software using UML language. It is the interface between applicant and authority responsible for issue the passport. It aims at improving efficiency and reducing complexities.

2. Scope:

   The system provides the online interface to the user where we can fill their form and personal detail with necessary proof.

   The authority concerned with the issue of passport can use this system to reduce its workload and process it speedy manner.

   It provides communication platform between administrator and applicant.

   To transfer the data between passport authority and local police verifying the applicant’s information.

3. Project description:

   My project title is passport automation system. In this project we can develop the 5 modules such as login, fill the form with necessary proof, verifying the applicant’s information, validity checking and issue the passport for that particular applicant.

   In this login module, we can perform that that perform that enters into the login website for the different actors, and then fill for the can be done by the
primary and verification, validation checking and issuing the passport can be done for the supporting actor.

4. Requirements:

*Functional requirements:

It is defined as how they should react in the particular input and how the system should react in the particular situations and what the system do not do.

In my project, login as functional requirement. In that functional requirement we may check the user name and password is correct or not. After checking entity of login, we can show the detail based on the type of actor.

➢ Analysis:
In this place, the project requirement is analyzed and availability of requirement is seen.

➢ Design:
Project manager makes the design of the project.

➢ Implementation:
The construction of project is done and coding is developed.

➢ Maintenance:
In this the software maintenance and the ways to avoid the drawback of software is made.
*Non-Functional requirements:*

This system can load at the speed of 2.4GHz-3.6GHz.

Memory 4GB RAM

Transferring data speed 50 Mbps in time.

It is high portability, reliability, accepting failure rates and user friendly.

➤ **Hardware requirements:**

Processor: Pentium –IV

Hard drive: 320 GB

RAM: 4GB

DVD-Drive: 1

➤ **Software requirements:**

Operating system: Windows XP

Front-end: Rational Rose Enterprise Edition

Back-end: Oracle 9i

5. **Module description:**

In this project consists of 5 modules, namely, login, fill the form, verifying applicant details, validity check.

• **Login:**
In this module, we can perform operation such as enter the user name and password. If the user name and password is correct then it can be entered into the specific web page. Otherwise re-enter the user name and password at the particular time’s only.

- **Fill the application:**
  When we are go to fill the application form before you can tell either apply for new passport or renewal the old passport. We can fill the application form with corresponding ID proof and address proof and then submit the form.

- **Verification of the form:**
  After submission of the form, to the responsible authority are verified that given information is true or not and they are forwarded to local police. Local police enquiry that corresponding information is true or not. After collecting the information it will forwarded to higher authority.

- **Validation checking:**
  When the customer, go to apply for the airline ticket. The passport must be checked if it is valid or not. Every passport as valid up to 5 years only. The applicant’s must renewal the passport for every five years.

- **Issue the passport:**
  After verification and validation the passport can be issued to the applicant through the post. Then the passport can be checked and signed the post record the accepted the passport.
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6. Domain model:

A domain is a visual representation of conceptual classes or real situation object in a domain.

*In object-oriented analysis, the domain model is the most important.

*It illustrates the concept in the domain.

*It acts as a source of inspiration for designing some software objects.

In our project, when we are entered into the corresponding web page, we can perform the operation such as status information, fill the form, verification is done in the web site.

DIAGRAM: ........

8. Logical architecture:

The logical architecture is the large-scale organization of software classes into packages, sub classes and layers. This is called logical architecture.

DIAGRAM......

9. Risk architecture:

It defines that some process loss, or any problem can be faced while creating the project.

*Software risk:
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If the software for passport automation, it is works very fast, after some times software works very slowly because of virus attack. It can be rectified by the new way.

*Hardware risk:

If the hardware component is suddenly burn or broke down due to over burden, while creating the project.

*Non-function risk:

Due to failure of Hardware and software, then it can’t be completed with in the time schedule and budget schedule.

10. Gantt chart:

It describes the time schedule for the planning to complete the core product and after complete of core product, what is the time taken for the project action of core project.
11. Pre-function and post-function:

*Login:

- Pre-function: enter the username and password.
- Post-function: Verify the username and password.

*Application form:

- Pre-function: Fill the form with details.
Post-function: Submit the form.

**Verification:**
Pre-function: Taking the applicant form.
Post-function: Verify the information and enquiry to applicant.

**Validity checking:**
Pre-function: Checking validity date.
Post-function: Renewal the old passport.

**Issue the passport:**
Pre-function: Send the passport to applicant address.
Post-function: Receive the passport form the postman.

12. UML package diagram:
An UML package diagram provides a way to group elements.

A UML package can group anything classes other package is very common. A UML package is a general concept then simply a java package or .net name space through a UML package can represent two and more forward allow from strew manage to customer.
13. Technical service layer:

This shows the interaction between the actor and object in sequence diagram. The forward arrow from system admin to authority it indicates verifies...
the applicant’s details. The system admin verify the application details and then the authority issue the passport.

14. Domain object layer:

After composing the technical service layer from partial layer architecture. Since we are going to generate the coding in java/VB the project domain is experienced in java/VB using rational rose software.

15. User interface layer:

This layer shows the interface with sequence diagram by changing the sequence symbol. The sequence symbol is replaced by an actor symbol, which shows interface between use case and sequence diagram.

16. Use case diagram:

The UML provides the use case diagram notation to illustrates the name of the use case actors and relationship between them.
17. Class diagram:

The UML include the class diagram, to illustrate and their association. They are used for static object modeling.
18. Sequence diagram:

A sequence diagram illustrates in a kind of format in which each object interact via messages. It is generalization between two or more specification diagram.
19. Partial layer architecture:

Sequence diagram is an interaction overview diagram. It provides a big picture overview of how a set of interactions is related in terms of logic and process flow.

This partial layer architecture shows the interface of a sequence diagram. Here the administrator shows the interface by displaying actor symbol.
20. Collaboration diagram:

It illustrates that object interaction in a graph or network format in which object can be placed any where on the diagram.
**Description:**

In collaboration diagram the relationship between applicant, system admin and authority. The people must fill the application form according to detailed furnished. The system admin verifies the all details and forward details to authority. He is enquiry the person and then issue the passport to applicant.

**21. State chart diagram:**

It illustrates the intrusting events and state of an object and behaviors of an object is reaction to an event. Transaction shows as allows labeled with theirs event. It is included with initial pseudo state and final end state.
Description:

The state chart diagram of passport automation system that the service of authority, who is issues the passport received by the applicant and getting the passport.

22. Activity diagram:

Passport Automation System
Activity diagram shows sequential and parallel activities in a process. They are useful for modeling business, workflows, the data flows and complex algorithm.

Description:
A UML activity diagram offers rich notation to flows a sequential of activities. It may be including parallel activities. It may be applied to any purpose, but it is popular for visualization of business workflows and use case.

Passport Automation System
23. Component diagram:

Description:
A component represents a modular part of a system, that encapsulates its contents and whose manifestation is replaced with in its environment. A component defines its behaviors in terms of provide and required interfaces.

Here the three components are applicant, system admin, and authority.

The interface between people and system admin, from people to authority.
24. Deployment diagram:

A deployment shows the assignment of concrete artifacts to computational nodes. It shows the deployment of software elements to the physical architecture, and the communication. Deployment diagrams are useful to communicate the physical and deployment architecture.

**Description:**

In the deployment diagram the object reference in component diagram is also included the deployment diagram. In this authority and system admin, interface through the people.

It is the process of installing the program.
25. Implementation:

After completing the 8 diagrams we have to select the respective programming language domain from the tool menu for each diagram we have to select main class and generate code for respective diagram.

26. Testing:

After completing the code generation for each diagram. Select the tool menu under quality architect performs unit testing and scenario testing for each code.

Testing activities are made several types of testing is carried on.

27. Conclusion:

Thus, the above project for passport automation system has been successfully executed and codes are generated.