

OBJECT ORIENTED ANALYSIS & DESIGN

**SCHOLARSHIP - SELECTION
SYSTEM**

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Classes:

1. Verifier
2. User
3. Organization
4. Student
5. Admin
6. Selected List
7. Scholarship
8. Student Details
9. Details&Criteria
10. Notification
11. Contact Info
12. Application & Renew

Data Dictionary

Verifier:

Verifier is a class used for verification purposes. In the first stage it verifies the details entered by the student with that of his details. In the second stage, it verifies whether the details given match the criteria for that particular scholarship.

User:

User is the person who has access to the portal and its contents. Every user has a unique-id with which the person can be identified.

Organization:

Organization is a user who offers scholarships to the students. The organization provides the details of the scholarship along with its criteria to the admin of the portal.

Student:

A Student uses the portal to view and apply for the scholarship. If a student wishes to apply for the scholarship, he/she has to fill the form associated with each scholarship and upload the necessary documents which are required for the scholarship.

Admin:

An admin is a user who has overall access to all the user accounts in the portal and is the one responsible for approving the scholarships, verify the documents

uploaded and to generate a list of shortlisted students. He is also responsible for updating the details and the overall maintenance of the portal.

Selected List:

This class contains the details of the students selected for the scholarship. The admin or organization can get the beneficiary details of the particular scholarship from this class.

Scholarship:

This class contains the scholarship ID and scholarship name provided by the scholarship and it also contains the acceptance status of the scholarship provided by the admin.

Student details:

This class consists of most of the details of the students like cgpa, DOB, annual income etc. which is used by the verifier class in the first stage of verification. The admin also updates this class if the student is selected for the scholarship.

Details & Criteria:

The details of the scholarship and the criteria provided by the organization to select the students is stored in this class and is used by the verifier to check whether the applicant matches the criteria.

Notification:

This class is used mainly for notifying the applicants regarding the progress of the application. It starts the process once it is invoked with the message to be sent by the classes during verification and shortlisting process.

Application & Renew:

This class consists of all the details entered in the form by the candidate at the time of applying for the scholarship. It also consists of all the documents uploaded by the candidate.

Contact Info:

As the name suggests this class consists of all contact details for each student on the portal.

Association and Multiplicity

Each student **has** a Student Detail(1-1)
Student **applies** for any number of Scholarships(many-many)
Verifier **verifies** Students Details(1-many)
Verifier **verifies** with Details & Criteria(1-many)
Verifier **send status** to Notification(1-many)
Verifier **uses** Application & Renew(1-many)
Every Scholarship **has** Details & Criteria(1-1)
Admin **approves** the Scholarship(1-many)
Admin **adds** details to Selected List(1-many)
Admin **sends** status to Notification(1-many)
Organization **adds** any number of Scholarships(1-many)
Organization **gets** details from Selected List(1-many)
Admin **verifies&updates** attributes of Application & Renew(1-many)

Classes refined using Inheritance:

1) Super Class:

- ❖ User

Sub Class:

- ❖ Student
- ❖ Admin
- ❖ Organization

Aggregation:

1) **Contact info** - it forms a part whole relationship with *Student Details* and *Application & Renew*

Composition:

Scholarship - a scholarship is supported by **Organization**. A particular scholarship must belong to a particular Organization.

Association Class:

Application&Renew- is a Association Class between Student and Scholarship.

Dependency:

Admin is dependent on **Details&Criteria** while executing the function shortlisting since it refers the final criteria attribute from the class Details&Criteria.

Description Classes:

- 1) **Student Details** is a description class of **Student**.
- 2) **Details & Criteria** is a description class of **Scholarship**.

Class Attributes and Methods

<i>Class</i>	<i>Attributes</i>	<i>Methods</i>
<i>User</i>	❖ Unique_id	➤ editprofile
<i>Student</i>	❖ Name ❖ Rollno	➤ Searchscholarship ➤ Uploaddetails ➤ Getinfo ➤ Viewstatus ➤ Renew ➤ Viewscholarship
<i>Organization</i>	❖ Cid ❖ Officer name ❖ Cname ❖ Address ❖ Phoneno ❖ Email	➤ <u>Addscholarship</u> ➤ <u>Editcriteria</u> ➤ <u>Removescholarship</u> ➤ <u>Viewstudinfo</u>
<i>Admin</i>	❖ Name	➤ <u>Addscholar</u> ➤ <u>Removescholar</u> ➤ <u>Getverifiedapplicant</u> ➤ <u>Shortlist</u> ➤ <u>Sendshort</u> ➤ <u>Checkdetails</u> ➤ <u>Update</u>
<i>Notification</i>	❖ Status ❖ Msg	➤ <u>Pushmsg</u> ➤ <u>Genmsg</u>
<i>Verifier</i>	❖ Verstat1 ❖ Verstat2 ❖ Verstat3	➤ <u>Checkcriteria</u> ➤ <u>Checkdetails</u> ➤ <u>Updatestatus</u>

<i>Student Details</i>	<ul style="list-style-type: none"> ❖ CGPA ❖ DOB ❖ Gender ❖ Religion ❖ Nationality ❖ Caste ❖ Phoneno ❖ Email ❖ Address ❖ Annual income ❖ Fee ❖ Quota ❖ Backlogs ❖ HSC marks ❖ SSLC marks 	<ul style="list-style-type: none"> ➤ <u>Viewdetails</u> ➤ <u>updatedetails</u>
<i>Selected List</i>	<ul style="list-style-type: none"> ❖ Studname ❖ Studroll ❖ Schname ❖ Schid ❖ Benefitamt 	<ul style="list-style-type: none"> ➤ <u>Fetchlist</u>
<i>Details & Criteria</i>	<ul style="list-style-type: none"> ❖ Year ❖ Percentage ❖ CGPA ❖ Annualincome ❖ Category ❖ Finalcriteria ❖ Amt ❖ Validity ❖ Backlogs ❖ Marks 	<ul style="list-style-type: none"> ➤ <u>Getcriteria</u> ➤ <u>UpdateCriteria</u>
<i>Contact info</i>	<ul style="list-style-type: none"> ❖ Altphoneno ❖ Email ❖ Altemail ❖ Phoneno 	<ul style="list-style-type: none"> ➤ <u>Getcontact</u>

<i>Application & Renew</i>	❖ Applicantid ❖ Name ❖ Roll no ❖ Cgpa ❖ Gender ❖ Nationality ❖ Annual income ❖ Percentage ❖ First graduate ❖ Sports quota ❖ Stud contact ❖ Parent contact ❖ Declaration ❖ Backlog count ❖ Marks ❖ Caste Verification Stat	➤ <u>Uploaddocument</u> ➤ <u>Fetchapp</u>
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Class Responsibility Collaboration:

Application & Renew

Filldetails() Uploaddocs()	Contactinfo
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Student

Viewsch()	Scholarship Details&Criteria
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Student

Renew()	Appication&Renew Scholarship Details&Criteria
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<u>Verifier</u>	
Checkcriteria() Checkdetails() UpdateStatus()	StudentDetails Details&Criteria Admin Application&Renew Contactinfo
<u>Notification</u>	
Pushmsg() Genmsg()	Contactinfo
<u>Admin</u>	
Update()	StudentDetails Organization Scholarship
<u>Admin</u>	
Sendsshort() Shortlisting()	Selected List Organization

Details&Criteria

Getcriteria()

Updatecriteria()

Scholarship

Admin

Organization

Class Model:

