Object Oriented Analysis & Design using Java
PESU Academy
Lab Assignment 1

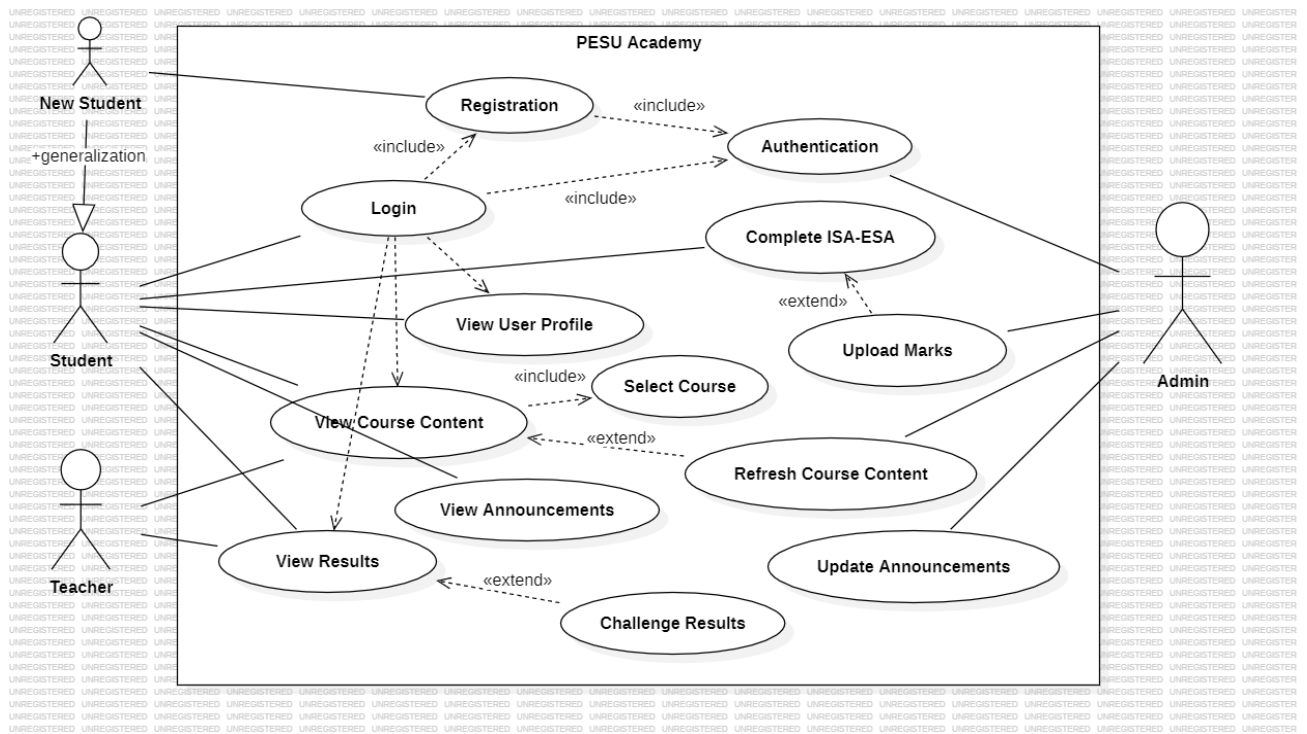Name: Urvashi Bhargava
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Q)

Initially, the student has to register to PESU academy and can login once authentication is performed by the admin. Once the student has logged in, the student can view their user profile, course content and their results. The course content is refreshed each semester and is required to have content from each of the courses the student chooses. If the student completes an ISA/ESA, then respective marks are uploaded on the results page, otherwise the previous results are displayed. The course content, results and announcements are uploaded by the admin.

Draw a use case diagram to model the behavior of the system and help capture the specified requirements using UML.

Provide Explanation on base usecase, include relationship, and extend relationship used in your design

Ans)

- PESU Academy Use Case Diagram

- ## Base Use Cases:

Registration, Authentication, Login, View User Profile, View Announcements, Complete ISA-ESA, Upload Marks, View Course Content, Select Course, Update Announcements, View Results, Refresh Course Content, Challenge Results: These represent the core functionalities of the PESU Academy system.

- ## Actor Associations:

S --|> Login, S --|> ViewUserProfile, S --|> CompleteISAESA, S --|> ViewAnnouncements, S --|> ViewCourseContent, S --|> ViewResults, S --|> ChallengeResults: Indicates that a Student can perform these actions.
NS --|> Registration: Indicates that a New Student can perform the Registration process.
T --|> ViewCourseContent, T --|> ViewResults: Indicates that a Teacher can perform these actions.
A --|> RefreshCourseContent, A --|> UpdateAnnouncements, A --|> Authentication, A --|> UploadMarks: Indicates that an Admin can perform these actions.

- ## Include Relationship:

Login --|> Registration, Login --|> Authentication, Registration --|> Authentication: Represents the inclusion relationships, showing that login includes registration and authentication processes. This ensures that these steps are part of the login process.

ViewCourseContent --|> SelectCourse: Indicates that viewing course content includes the ability to select a course.

- Extend Relationship:

UploadMarks --|> CompleteISAESA: Indicates that uploading marks can be extended to include completing ISA-ESA.

RefreshCourseContent --|> ViewCourseContent: Indicates that refreshing course content extends the ability to view course content.

ChallengeResults --|> ViewResults: Indicates that challenging results extends the ability to view results.