MA104 Java Project

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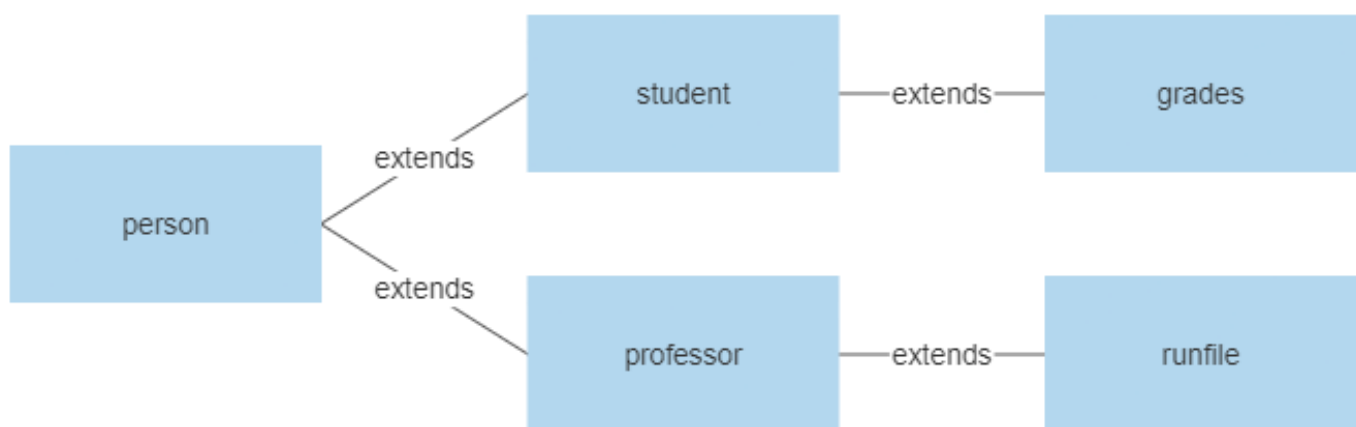
Roll No. – 21124010

Branch – Mathematics and Computing

Problem – Here we are trying to solve which student can choose which professor as his mentor for a project which is a necessary part of the student's curriculum.

Every professor can set a minimum CPI cut-off for students to choose them as mentors.

So, we display Professor's details and students' details along with the professor, student can choose as mentor by comparing his/her CPI with cut-off.

Schema Diagram –

Class details: -

person – It is the parent class for two other classes (student and professor). It helps in easily storing and printing state of a person like Name and Age.

student – It is subclass of class person. It helps in printing additional information of a person who is also a student like Roll number and Branch.

grades – Subclass of class student. Helps in printing the grades of respective student and storing it for later use.

professor – Subclass of class person. Helps to store and print additional details of person who are professors like Department, Teaching experience, CPI cut-off.

runfile – Subclass of class professor. Main class where objects are created and logic is implemented. All other classes are being used here directly or indirectly by use of inheritance and polymorphism.

Objects of grades and professor are created in main method of runfile.java. Functions compare and mentor are used to implement the main logic, i.e., function compare compares the student's CPI with Professor's Cutoff CPI. And function mentor helps to do the same with all professors and print the name of eligible.

Sample Output: -

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Professors Details :-

Name : Dr. L P Singh
Age : 54 years
Teaching Experience : 17 years
Department : Mathematical Sciences
Minimum CPI : 8.5

Name : Dr. S K Singh
Age : 53 years
Teaching Experience : 23 years
Department : Computer Science and Engineering
Minimum CPI : 9.0

Name : Dr. Ashok Gupta
Age : 50 years
Teaching Experience : 18 years
Department : Mathematical Sciences
Minimum CPI : 8.0

Name : Dr. V K Singh
Age : 43 years
Teaching Experience : 13 years
Department : Mathematical Sciences
Minimum CPI : 7.0

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Students Details :-

Name : Aryan
Age : 18 years
Roll no. : 21124010
Branch : MnC
CPI : 8.58
Can work under : Dr. L P Singh, Dr. Ashok Gupta, Dr. V K Singh,

Name : Piyush
Age : 16 years
Roll no. : 21124041
Branch : MnC
CPI : 8.57
Can work under : Dr. L P Singh, Dr. Ashok Gupta, Dr. V K Singh,

Name : Anish
Age : 18 years
Roll no. : 21065007
Branch : ECE
CPI : 7.57
Can work under : Dr. V K Singh,

Name : Parangat
Age : 18 years
Roll no. : 21283038
Branch : CSE
CPI : 9.0
Can work under : Dr. L P Singh, Dr. S K Singh, Dr. Ashok Gupta, Dr. V K Singh,
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