

CSE 215: Programming Language II Lab
MID TERM EXAM
Time: 1 hour 10 minutes
Marks: 20
SET-B

1. Marks of each Student:

	EEE141	EEE111	EEE315	EEE311	EEE223
Jamal	90	80	80	87	94
Mumunul	62	73	62	41	92
saad	70	20	90	87	64
Rana	10	70	100	97	64
Ashraful	30	90	50	57	64
Arifur	50	76	65	57	14
Ibrahim	74	77	17	67	34

Create a class named **Data** with main method. Then Declare a 2D array using given marks and a 1D array using subjects name. Pass these arrays to myTotalMark and specificSubject method.

Now Create another class named **Totalmark** with two methods

public void myTotalMark(int[][] marks,String[] subject): It will calculate and print the Total marks of each subject with subjects name.

public String[] specificStudent(int[][] marks,String[] subjects): It will calculate **Three Specific subjects total** marks according to user input(**Subject name**).For example, If User Enter **EEE141** it will calculate the total marks of EEE141. Store total marks and given names in a String Array. Then pass to the calling method.

Note: Using nested for-loop is mandatory for calculation. Manual calculation is not allowed.

2.

Create a class named “**Project**” having the following private data members:
engineerName ,totalProject

Create another class named “**Software_Projects**” having private data member: **totalExperience**
Software_Projects inherit the Project class.

Create another class named **Hardware_Projects** having private data member:
designation and a method,

public String [] engineer(Software_Projects[] arr1,Hardware_Projects[] arr2): It will find the engineers who worked in both projects and calculate the average of their totalProject.Store engineers name in a String array and pass to the calling method. Print average here.

Hardware_Projects inherit the Software_Projects class

Hint: check engineerName in both arrays.

Note: Declare necessary getter methods,constructors and toString methods in all classes.

Now Create a class for the main method. Take five Software_Projects and five Hardware_Projects information **using array of objects and constructor from user input.**

- i. Print all info using toString methods.
- ii. Print engineers name and project average.