



EASTERN UNIVERSITY, SRILANKA

DEPARTMENT OF MATHEMATICS

SECOND EXAMINATION IN SCIENCE - 2009/2010

FIRST SEMESTER (June./July., 2011)

OC 251 – Practical work on Java Programming

Answer all questions

Time: 2 Hours

1. Write a program to read in a collection of exam scores ranging in value from 1 to 100. Your program should count and print the number of outstanding scores (90-100), the number of satisfactory scores (60-89), and the number of unsatisfactory scores (1-59). It should also display the category of each score. Also your program should display the average exam score at the end of the run.

The completed program should create output such as the following.

```
Enter score (or -1 to finish)
```

```
55
```

```
Unsatisfactory
```

```
Enter score (or -1 to finish)
```

```
86
```

```
Satisfactory
```

```
Enter score (or -1 to finish)
```

```
60
```

```
Satisfactory
```

```
Enter score (or -1 to finish)
```

```
92
```

```
Outstanding
```

```
Enter score (or -1 to finish)
```

```
-1
```

```
1 unsatisfactory marks
```

```
2 Satisfactory marks
```

```
1 outstanding marks
```

```
73.25 is the Average marks
```

2. Create a class called *Employee* that includes three pieces of information as instance variables

First name (type String)

Last name (type String)

Monthly salary (double).

Your class should have the following methods:

Constructor that initializes the three instance variables.

Provide a **set** and a **get** method for each instance variable. If the monthly salary is not positive, set it to 0.0.

Write a test application named *EmployeeTest* that demonstrates class *Employee*'s capabilities. Create two *Employee* objects and display each object's yearly salary. Then give each *Employee* a 10% pay rise and display each *Employee*'s yearly salary again.

3. Write a program to generate prime numbers between 1 and a number given by user at run time.