



**EASTERN UNIVERSITY, SRILANKA
DEPARTMENT OF MATHEMATICS**

THIRD YEAR EXAMINATION IN SCIENCE-2012/2013

SECOND SEMESTER (JUNE, 2016)

**352 -PRACTICAL WORK ON FUNDAMENTAL OF JAVA PROGRAMMING
(SPECIAL REPEAT)**

all questions

Time allowed: Two Hours

Write a java program to print the following pattern in a class called **PrintPattern** using for loops.

```
#####  
#####  
#####  
#####  
#####  
#####  
#####
```

Write a java program to read the values from keyboard and store the values in an array. Sort down the array elements in descending order.

For example:

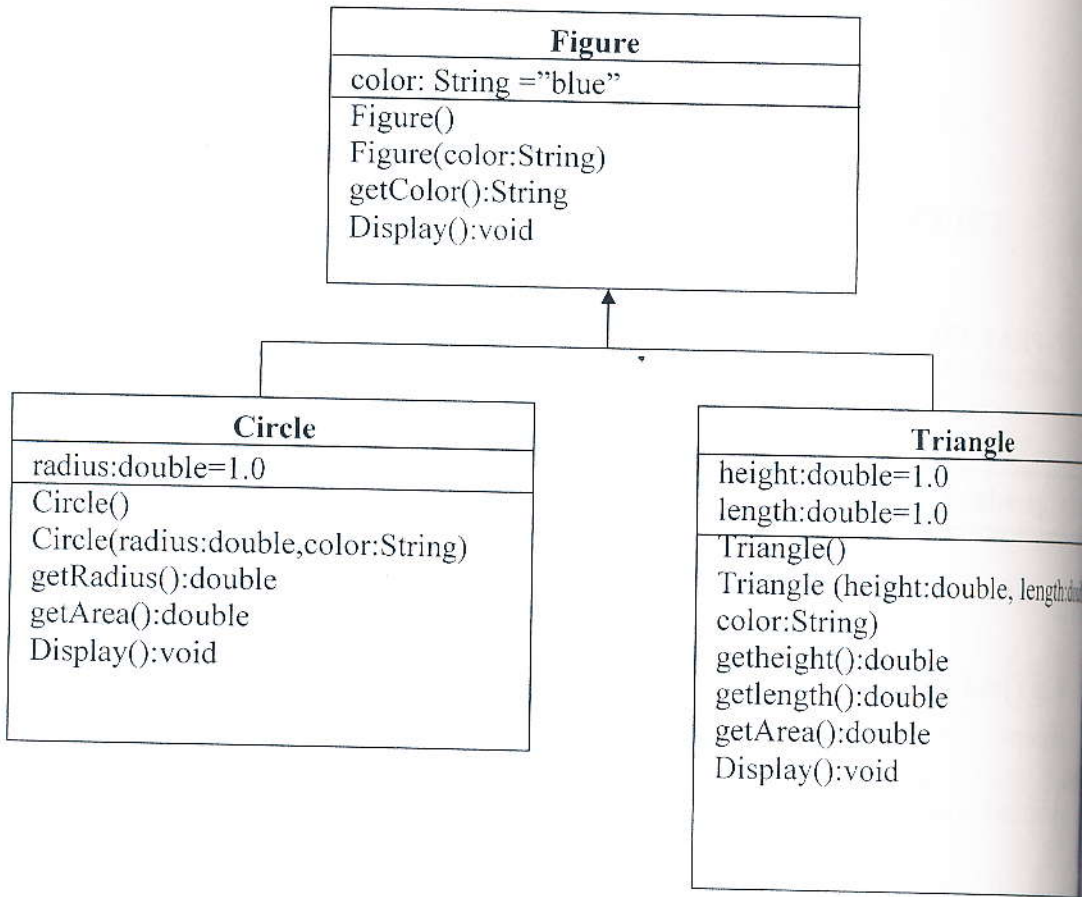
Input:

| | | | | |
|----|----|----|----|----|
| 19 | 45 | 12 | 35 | 10 |
|----|----|----|----|----|

Output:

| | | | | |
|----|----|----|----|----|
| 45 | 35 | 19 | 12 | 10 |
|----|----|----|----|----|

Q2. Write a java program to do the following tasks.



Create a super class called **Figure** (as shown in the class diagram), which contains:

- A variable `color` (String).
- Two constructors: Default constructor that initializes the `color` to "blue", and a parameterized constructor that initializes the `color` to the given value.
- `getColor()` method that returns the `color` value.
- A `Display()` method that returns "A Figure with color of xxx".

Create two subclasses of **Figure** called **Circle** and **Triangle**, as shown in the class diagram.

The **Circle** class contains:

- A variable `radius` (double).

Two constructors as shown in the class diagram. Default constructor initializes the radius to 1.0.

getRadius() method that returns the radius value.

Method **getArea()** to calculate area of the circle.

Override the **Display()** method inherited, to return "A Circle with radius=xxx, which is a subclass of yyy", where yyy is the output of the **Display()** method from the super class.

Triangle class contains:

Two variables height (double) and length (double).

Two constructors as shown in the class diagram. Default constructor initializes the height and length to 1.0.

getHeight() and **getlength()** that returns the height and length values.

Method **getArea()** to calculate the area of triangle.

Override the **Display ()** method inherited, to return "A Triangle with height=xxx and length=zzz, which is a subclass of yyy", where yyy is the output of the **Display ()** method from the super class.

objects for the sub classes and print the values.