Computer Engineering Department Kuwait University

**CpE 201/01**

**Object Oriented Paradigm**

**HW#6**

**Due: 8th November at 23:55**

**Important Notes:**

1. **All files should be in one folder hw6YOURNAME (hw6Sara)**
2. **All files should be .java files (EX: q1sara.java, q2sara.java, ...) with your Name & ID as comment in the top of the programs**
3. **Don't forget to change class name to match file name (EX: q1sara.java --> class name should be q1sara)**
4. **Compress your folder and upload**
5. **Don't wait for the last minute, the upload my take sometime and if the submission is closed it will not be reopened**
6. **The files should also contain the output as a comment at the end of the program between /\*\*/**
7. **You have two jokers to be used for the homework. Each joker will give you a 24 hours delay. Once the homework is discussed in class no joker is accepted**
8. Write an application that generates n random integers in the range provided by the user. Use method genrateEven to generate even numbers only and generateOdd to generate odd numbers.

void generateOdd(int n, int r1, int r2);

void generateEven(int n, int r1, int r2);

**Sample run:**

How many integers you have? 5

What are your number ranges? 3 10

The generated even numbers are 6 4 8 10 6

The generated odd numbers are 3 7 9 3 5

1. Write a method that uses a method checkArm to check whether the number is Armstrong or not. An Armstrong number is a number such that the sum of its digits raised to the third power is equal to the number itself. e.g. 371 is an Armstrong number, 3^3 + 7^3 + 1^3 = 371

**Sample run:**

Please enter a number (-1 to stop): 371

This is number is an Armstrong number

Please enter a number (-1 to stop): 301

This is number is not an Armstrong number

Please enter a number (-1 to stop): -1

Thank you!

1. Write a program that reads a 5-digit number and reorder its digits using method order.

**Sample run:**

Please enter a number: 342

Wrong too small!

Please enter a number: 34333

Wrong too long!

Please enter a number: 3427

The ordered number is: 7432

1. Write a program that draws 3 nested shapes randomly. The program should draw circles, squares or rectangles. Their colors should be blue, red and yellow

**Sample run:**

 