

Programming in Java

Assignment Set 4

Date: 05/02/2019

1. Write a Java program to implement a class 'Quadrilateral'. The class should have two private members – length and breadth. The class should include the following:
 - (a) A zero argument constructor should initialize length and breadth with default values.
 - (b) A one argument constructor should initialize both length and breadth with the same value.
 - (c) A two argument constructor to initialize length and breadth with two different values.
 - (d) A constructor with a Quadrilateral object argument to initialize length and breadth from the object's length and breadth.
 - (e) A function for display.
 - (f) A function to calculate the area and perimeter and display the same.
2. Write a Java program to implement a 'Mystring' class. The class should include the following:
 - (a) A character array, str[] for storing the string which should be private.
 - (b) A private member, length to store the length of the array.
 - (c) A zero argument constructor for initializing a character array of length 80 where the first element should be '0'.
 - (d) A one argument constructor to initialize str from a given character array.
 - (e) A constructor to initialize str from another Mystring object.
 - (f) A method (myStartsWith) to find out whether the string begins with a given substring (character array) or not.
 - (g) A method (myEndsWith) to find out whether the string ends with a given substring (character array) or not.
 - (h) A method (myCharAt) to return the character present at the given position.

[Note: You are not allowed to use any of the methods of the Java inbuilt String class]
3. Write a Java program to implement a 'Student' class. The class should have members for storing the roll number, name and marks obtained (out of 100) in two different subjects. Declare an array of 5 such students and then sort them in ascending order of the total marks scored in the two subjects taken together.
4. Write a Java program to accept an array of numbers through the command line and of them reverse the numbers having 3 digits only.
5. Write a Java program to accept an array of numbers through the command line and display them without any repetitions.
6. Write a Java program to accept an array of strings through the command line and of them reverse the strings consisting of only five characters.
7. Write a Java program to accept an array of numbers through the command line and display the sum of only the prime numbers amongst them.