Aror University of Art, Architecture, Design & Heritage Sukkur.

Department of Artificial Intelligence and Multimedia Gaming

Object Oriented Programming(Spring-2024)

LAB No. 6

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Objective of Lab No. 6:
After performing lab6, students will be able to:
- o Use Strings and String methods
- o Use Random class
- o Use Inner and Static classes
- o Use Static variables and Static Method

Lab Exercises:

1. Create a class CPU, and add an instance variable named price
   a. Add an inner class named Processor inside CPU, Processor has number of cores and a manufacturer.
   b. Add a method in Processor called getCache() which returns a value of 4.3
   c. Add another class inside Processor class, this class should be static and its name is RAM, A RAM has memory and manufacturer(static), it has a static method getClockSpeed() which returns a value of 5.5
   d. Inside main method, create three objects:
      i.   Object of CPU class
      ii. Object of RAM Class
      iii. Object of Processor Class
   e. Call the getCahce() and getClockSpeed() method

2. Write a program to input a string from the user and print its characters in reverse order using the charAt(int index) method.

3. Write a program to input a string from the user and check if it is empty using the isEmpty() method. Print "String is empty" or "String is not empty" accordingly.

4. Write a program to input a string from the user and find the index of the first occurrence

of the letter 'a' using the indexOf(String str) method. Print the index or "-1" if 'a' is not found.

5. Write a program to input 5 strings from the user and store these in an array, Now convert each to uppercase using the toUpperCase() method. Print the uppercase string.

6. Write a program to input a string from the user and check if it starts with the word "Hello" using the startsWith(String prefix) method. Print "String starts with Hello" or "String does not start with Hello" accordingly.

7. Write a program to input a string from the user and check if it ends with the word "world" using the endsWith(String suffix) method. Print "String ends with world" or "String does not end with world" accordingly.

8. Write a program to input a string from the user and check if it contains the word "Java" using the contains(CharSequence sequence) method. Print "String contains Java" or "String does not contain Java" accordingly.

9. Write a program to input a string from the user and remove all the spaces from it using the replace(char oldChar, char newChar) method. Print the modified string.

10. Write a program to input a string from the user and split it into words using the split(String regex) method with a space as the delimiter. Print each word on a new line.