

BTECH(CS) V SEMESTER (JAVA PROGRAMMING) 2024
SECOND ASSIGNMENT

TOTAL MARKS: - 10

Q1. Write a program to create a class “**STUDENT**” with the data members Rollno, Name, Course, Branch, and Semester. Store them in an array of objects and perform the following operation:

- Sorted list of student in the ascending order of Name.

Q2. (a) What is super keyword in Java? Demonstrate the use of parameterized constructor in inheritance.

(b) Explain interface in JAVA. How do interfaces support polymorphism?

Q3. What is a package? Explain the various packages that are available in Java. How are classes added into a user defined package?

OR

Q- Give the general form of the import statement. Illustrate a Java program that creates a package and uses it.

Q4. Explain Exception handling in JAVA. Write an application that generates custom exception if any value is negative.

Q5. Write a Java program to raise and handle the following exception

1. Arithmetic Exception
2. ArrayIndexOutOfBoundsException
3. NullPointerException
4. NumberFormatException
5. InputMismatchException

Q6. Write a program for user defined exception that checks the internal and external marks. If the internal mark is greater than 40, it raises the exception “internal marks is exceed”. If the external mark is greater than 60, it raises the exception and display the message “external marks is exceed”. Create the above exception and use it in your program.

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Q7. Write a Java program to throw user defined exception.

Q8. Explain Thread Life Cycle in detail. Write a code to create Thread in JAVA.

Q9. Differentiate between Runnable Interface and Thread in Java with appropriate example. How can the priorities of a thread be set, explain.

Q10. Why synchronization is required in multithreaded programming and how can we implement it in program?

Q11. Write short notes on:

- a. GUI Components
- b. Wrapper class

Q12. Explain the following:

- i. Applet vs. Application
- ii. Java and Internet
- iii. Basic feature of HTML