

TIT 611: Computer Programming (JAVA)

PRACTICAL SESSION 1

1. Write a Java program to print 'Hello' on screen and then print your name on a separate line.
Expected Output:

Hello
Alexandra Abramov

2. Write a Java program to print the following strings
Expected Output:

Tomorrow I 'll learn Java Data types.
This is a bad command: del c:*. *

3. Write a Java program to declare two integer variables, one float variable, and one string variable and assign 10, 12.5, and " Java programming" to them respectively. Then display their values on the screen.

4. Create a program that asks the user to enter their name and their age. Then program should display the message **“Welcome name you are age years old”**

5. Write Java program to allow the user to input two float values and then the program adds the two values together. The result will be assigned to the first variable.

Enter value a:12.5
The value of a before adding is 12.5.
Enter value b:34.9
The value of a after adding is 47.4.

6. Write Java program to allow the user to input two integer values and then the program prints the results of adding, subtracting, multiplying, and dividing among the two values.

See the example below:

Enter value a:30
Enter value b:10
The result of adding is 40.
The result of subtracting is 20;
The result of multiplying is 300.
The result of dividing is 3.

CD/INF 0114: OBJECT ORIENTED PROGRAMMING

PRACTICAL SESSION 2

1. Write a program that reads three numbers and prints the largest number
2. Write a Java program that determines a student's grade.

The program will read three types of scores (quiz, mid-term, and final scores) and determine the grade based

on the following rules:

- if the average score $\geq 90\%$ \Rightarrow grade=A
- if the average score $\geq 70\%$ and $< 90\%$ \Rightarrow grade=B
- if the average score $\geq 50\%$ and $< 70\%$ \Rightarrow grade=C
- if the average score $< 50\%$ \Rightarrow grade=F

See the example output below:

Quiz score: 80
Mid-term score: 68
Final score: 90
Your grade is B.

3. A certain CS professor gives 5-point quizzes that are graded on the scale 5-A, 4-B, 3-C, 2-D, 1-F, 0-F. Write a program that accepts a quiz score as an input and uses a decision structure to calculate the corresponding grade.

4. Consider the following code fragment:

```
int sum = 0;
int i = 0;
while (i < 5)
{
    sum += i;
    i++;
}
System.out.print(sum);
```

Replace the while loop in the fragment above with a for loop that prints the same value of sum variable.

5. Write a program to display all odd numbers between 0 and 1000.
6. Write a program to display the sum of all even numbers between 0 and 100.
7. Write a Java program to store the score into an array and output the stored score on the computer screen descending order (from largest to smallest). knowing that the number of the students and the student score shall be given by the user.

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PRACTICAL SESSION 3

1. Write a program that uses nested loops to collect data and calculate the average rainfall over a period of years. The program should first ask for the number of years. The outer loop will iterate once for each year. The inner loop will iterate twelve times, once for each month. Each iteration of the inner loop will ask the user for the inches of rainfall for that month. After all iterations, the program should display the number of months, the total inches of rainfall, and the average rainfall per month for the entire period.
2. Write a program with a loop that asks the user to enter a series of positive numbers. The user should enter a negative number to signal the end of the series. After all the positive numbers have been entered, the program should display their sum.
3. Write a Java application that inputs a series of integers and determines and prints the largest integer. Your program should use at least the following three variables:
 - (a) counter: A counter to count to 10 (i.e., to keep track of how many numbers have been input and to determine when all 10 numbers have been processed).
 - (b) number: The integer most recently input by the user.
 - (c) largest: The largest number found so far.
4. Write a program which prompts user for the number of students in a class, It then prompts user for the grade of each of the students (integer between 0 to 100) and saves them in an int array called score. The program shall then compute and print the average (in double rounded to 2 decimal places) and minimum/maximum (in int).
5. Write a program that asks the user to enter the amount that he or she has budgeted for a month. A loop should then prompt the user to enter each of his or her expenses for the month, and keep a running total. When the loop finishes, the program should display the amount that the user is over or under budget.