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**ROLL NO:24**

**BATCH : B2**

**COURSE: OOPs PRACTICAL**

**Assignment No.6**

**Problem Statement:** Write a program in Java to implement a Calculator with simple arithmetic operations such as add, subtract, multiply, divide, factorial etc. using switch case and other simple java statements. The objective of this assignment is to learn Constants, Variables, and Data Types, Operators and Expressions, Decision making statements in Java.

1. import java.util.Scanner;
2. public class Calculator
3. {
5. public float add(float num1,float num2)
6. {
7. return num1+num2;
8. }
10. public float sub(float num1,float num2)
11. {
12. return num1-num2;
13. }
15. public float mul(float num1,float num2)
16. {
17. return num1\*num2;
18. }
20. public float mod(float num1,float num2)
21. {
22. return num1%num2;
23. }
25. public float div(float num1,float num2)
26. {
27. if(num2==0)
28. {
29. System.out.println("Divide By Zero");
30. }
31. return num1/num2;
32. }
34. public float fact(float num)
35. {
36. int i,fact=1;
37. float number= num;
38. for(i=1;i<=number;i++)
39. {
40. fact=fact\*i;
41. }
42. return fact;
43. }
45. public static void main(String args[])
46. {
47. float num1 , num2;
48. int ch;
50. Calculator c = new Calculator();
51. Scanner sc = new Scanner(System.in);
52. do{
53. System.out.println("1.Addition\n2.subtraction\n3.Multiplication\n4.Division\n5.Mod\n6.factorial\n7.Exit");
54. System.out.println("\nEnter Your Choice");
55. ch = sc.nextInt();
56. System.out.println("\nEnter num1");
57. num1 = sc.nextInt();
58. System.out.println("\nEnter num2");
59. num2 = sc.nextInt();
60. //c.setdata(num1, num2);
62. switch(ch)
63. {
64. case 1:
65. System.out.println("\n Addition "+c.add(num1,num2));
66. break;
68. case 2:
69. System.out.println("\n Subtraction "+c.sub(num1,num2));
70. break;
72. case 3:
73. System.out.println("\n Multiplication "+c.mul(num1,num2));
74. break;
76. case 4:
77. System.out.println("\n Division "+c.div(num1,num2));
78. break;
80. case 5:
81. System.out.println("\n Mod "+c.mod(num1,num2));
82. break;
84. case 6:
85. System.out.println("\n factorial "+c.fact(num1));
86. System.out.println("\n factorial "+c.fact(num2));
87. break;
89. case 7:
90. System.out.println("Exit");
91. break;
92. }
93. }while(ch != 7);
94. }
95. }

**OUTPUT:**

1.Addition

2.subtraction

3.Multiplication

4.Division

5.Mod

6.factorial

7.Exit

Enter Your Choice

1

Enter num1

4

Enter num2

6

Addition 10.0

1.Addition

2.subtraction

3.Multiplication

4.Division

5.Mod

6.factorial

7.Exit

Enter Your Choice