

# Assessment Item 1

## Task One:

java program to take two inputs from users and calculates its cubic value and square of it and display in table form and also greet and farewell the user.

```
'Welcome to Calculator Program'

Enter the First non-negative value:
2
Enter the second non-negative value but comparatively larger then first input:
3
Calculation Square and cube value that you provided:

    Number  Square  Cube
    2       4.0    8.0
    3       9.0   27.0

'Goodbye, thank you for using our program!'

C:\Users\binod\Documents\Office project>java calculate
'Welcome to Calculator Program'

Enter the First non-negative value:
5
Enter the second non-negative value but comparatively larger then first input:
8
Calculation Square and cube value that you provided:

    Number  Square  Cube
    5      25.0  125.0
    8      64.0  512.0

'Goodbye, thank you for using our program!'
```

## Explanation

Task one is done on java programming language. There are “Forty Two” line of codes (LOC) written to solve the task one. In task one there are six variables with integer datatypes which are “val1, val2, resultSquareForVal1, resultCubeForVal1, resultCubeForVal2, resultSquareForVal2” which take user input as first and second input and calculated value as cube and square as above figure of output of task one. To calculate the value math function called “pow()” is used. it takes two parameter where first one is value and second is value’s power. For square, power two is given and cube three is give and rest is user input. Condition statement like if, if else and nested if else is used to check/validate the second number is lager or not and both number are positive or not. If the user gives the wrong data then it prints the error message and terminate the program. System print function is used to print message and information as shown in the above figure.

## Task Two:

Java program to take three category books value as input and calculate the total price of purchased book.

```
                'Welcome to the annual book festival!'

Enter the number of large print hardback books purchased: 3
Enter the number of small print hardback books purchased: 4
Enter the number of softcover books purchased: 5
Your total bill is:55
Would you like to calculate another bill (y/n):y
                'Welcome to the annual book festival!'

Enter the number of large print hardback books purchased: 4
Enter the number of small print hardback books purchased: 6
Enter the number of softcover books purchased: 7
Your total bill is:85
Would you like to calculate another bill (y/n):n
Goodbye!
```

## Explanation:

Task two is also done in java programming language. There are “Seventy Six” of lines code to solve the this task two. In task two there are six static integer datatypes to define price characteristic of book (i.e LARGE\_PER, LARGE\_THREE, SMALL\_PER, SMALL\_TWO, ALL\_PER, ALL\_FIVE) according to book categories where as other seven integer datatypes variables (i.e lBook, price\_One, sBook, price\_Two, aBook, price\_Three, result) to store user input in lBook, sBook and ALL\_FIVE. User is prompt three times to user to give integer value and at the same time it check or validate the user inputs is right or wrong if it is wrong then program is terminated otherwise ok for correct input. Then calculate the price of the books purchased based on the books categories, after that it also calculate the final bill of the book purchased by using mathematic calculation like modulus and division to get the Quotient and Remainder of user input and display it. Conditional statement is used in calculation to direct the calculation flow according to the price label of book categories to get real value.