

Part 1 –

Write a Java statement to accomplish each of the following tasks:

1. Declare variables **sum** and **num** to be of type **int**.
2. Assign **1** to variable **num**.
3. Assign **0** to variable **sum**.
4. Add variable **num** to variable **sum**, and assign the result to variable **sum**.
5. Print "**The sum is:** ", followed by the value of variable **sum**.

Combine the statements that you wrote above into a Java application that calculates and prints the **sum of the integers from 1 to 10**. Use a **while** statement to loop through the calculation and increment statements. The loop should terminate when the value of **num** becomes **11**.

Part 2 (do ..while)

Write a Java program using a **do.. while** statement to accomplish the following Menu tasks:

1. Output to screen the following menu and prompt the user for a response ...

1. File
2. Edit
3. Save
4. Delete
5. Exit

Select option

2. Depending on the option selected output an appropriate message. For example if the user selects **1** then output "**File selected**". The menu should then be shown on the screen again and the user prompted for another option. Only exit the program if the user selects **5**.

Note : if the user selects any entry other than **1-5** you should output an error message and redisplay the menu and again prompt for an option.

Part 3 (FOR Loops)

1. Write a program that prompts the user for a name and then prints it to screen 10 times. The name should be stored as a **String** in the program. Update the program to take the input from the user.

2. Write a program that outputs the following (note the comma between numbers)

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

3. Write a program that outputs the following

10, 9, 8, 7, 6, 5, 4, 3, 2, 1, Liftoff!

4. Repeat question 3 using a While loop.

5. Write a program that outputs only the **even** numbers between **1 - 100**. Hint : use the modulus operator.

6. Write a program that outputs only the **odd** numbers between **10 – 40** (inclusive).

7. Write a program that outputs a countdown from 1000 to 0 but with the help of a **break** statement will terminate at 333 and output the message “Launch aborted!”

8. Nested FOR statements - write a program that outputs

```
*1, *2, *3, *4, *5, *6, *7, *8, *9, *10
**1, **2, **3, **4, **5, **6, **7, **8, **9, **10
***1, ***2, ***3, ***4, ***5, ***6, ***7, ***8, ***9, ***10
```

9. Write a program that will output all the leap years between 1910 and 1990. Hint use the **modulus** operator (%) to complete this one.
10. Write a program that prompts the user for his/her age between 1 and 100. Include sensible range validation, e.g. 1 – 120. If outside that range advise the user to check their age input and try again. Continue to do this until the input is within the range (**use a do..while loop**). Then output a message based on the following rules.

Age range	Message
1- 30	You are young
31 -60	You are getting on!
61 - 120	You look amazing for your age!