Computer Programming I (LAB - 8)

Program Name	Description
BSLab8a.java	Write a java program that prints the result of an operation on two numbers. The numbers and operation should be entered by the user. Your program should ask for the two number, and then show a menu of options after the number have been entered, the output below is to demonstrate how the program should work

Output

```
Enter the 1st number: 9

Enter the 2nd number: 27

---- Menu ----
 A - Add
 B - Subtract
 C - Divide
 D - Multiply
 --------------

Enter one option: A

9 + 27 = 36
```

  NOTE: The value 9, 27, A and 36 are to illustrate who the program should work

Program Name	Description
BSLab8b.java	Write a Java program that displays the result of all times tables from 1 and 10. **NOTE:** You do not need to store the result in an array

Output

```
 1    2    3    4    5    6    7    8    9   10
 2    4    6    8   10   12   14   16   18   20
 3    6    9   12   15   18   21   24   27   30
 4    8   12   16   20   24   28   32   36   40
 5   10   15   20   25   30   35   40   45   50
 6   12   18   24   30   36   42   48   54   60
 7   14   21   28   35   42   49   56   63   70
 8   16   24   32   40   48   56   64   72   80
 9   18   27   36   45   54   63   72   81   90
10   20   30   40   50   60   70   80   90  100
```

 NOTE: Each column represents the result of one of the time tables, for example
      the first column (leftmost) is the result of the 1 times table, the second
             column is the result of the 2 times table, and so on.

Computer Programming I (LAB - 8)

Program Name	Description
BSLab8c.java	Write a Java program that takes a String from user and converts it to numbers using the ASCII table. The conversion should happen in a different method, and the result should be returned to the main method, which receives and displays the converted message. **HINT:** User chartAt(index) within a loop (index is the pointer !)
Output	

Please, enter a sentence: **Computer Programming**

Message: 67 111 109 112 117 116 101 114 32 80 114 111 103 114 97 109 109 105 110 103

NOTE: **The values are to illustrate how the program should work**

Program Name	Description
BSLa8d.java	Write a Java program that creates an **multidimensional array** (5 x 5), populates the array using **nested loops** with letter from **A** until **Y**, and displays the array to the screen.
Output	

```
A B C D E
F G H I J
K L M N O
P Q R S T
U V W X Y
```

Extras
No submission required !!!

Program Name	Description
BSLab8Ex1.java	Using **Switch statment**, write a java program that prints a month of the year based on a number entered by a user **(Scanner)**.
Output	

Month of the year: **2**

February

  NOTE: The 2 and February are just to illustrate the output of the program !!!

Program Name	Description
BSLab8Ex2.java	Write a Java program that take an input from user, and prints a times table from the input to the screen using **nested loops**
Output	

```
Times Table: 7

7 x 0 = 0
7 x 1 = 7
7 x 2 = 14
7 x 3 = 21
7 x 4 = 28
7 x 5 = 35
7 x 6 = 42
7 x 7 = 49
7 x 8 = 56
7 x 9 = 63
```

         NOTE: The values are to illustrate how the program should work

Computer Programming I (LAB - 8)

Program Name	Description
BSLab8Ex3.java	Write a program that displays a menu to the screen. Using a **BufferedReader** and **Switch statement**, your program should ask the user for an option and then display a different message for each ones. The program should then display the menu again and wait for the user to type another option. The programs finishes **only** when the user chooses the **Exit** option in the menu.
Output	

```
--- Menu ---
 1 – Hi
 2 - Hello
 3 – H R U ?
 0 - Exit

Please, enter an option:
```

> **NOTE: Each option should display a different message to the screen**
>
>   **Option 1:** "Hi !!!"
>   **Option 2:** "Hello Hello"
>   **Option 3:** "How are you ?"
>   **Option 0:** "Bye bye" **(This option also terminates the program)**

Program Name	Description
BSLab8Ex4.java	Write a program that displays a menu to a user, awaits the user to enter an option (using **Scanner**), and produces a different message for each option based on a number from **0** to **10 (NOT HARDCODED !!!)**
Output	

```
--- Menu ---
 A – Asc
 D - Desc
 O – Odd
 E – Even

Enter an option or 'X' to exit:
```

> **NOTE: Each option should display a different message to the screen**
>
>   **Option A:** 0 1 2 3 4 5 6 7 8 9 10
>   **Option D:** 10 9 8 7 6 5 4 3 2 1 0
>   **Option O:** 1 3 5 7 9
>   **Option E:** 0 2 4 6 8 10

If the user types **"X"**, the program should only finish if the users says "YES" to
        the following question: **"Would you like to finish the program ?"**

Sample Exam Question

A. **Using Switch statement**, write a Java code for the following pseudo-code:

```
if choice is 'A' then
       print "Add new User"
else if choice is 'S' then
       print "Search for a User"
else if choice is 'M' then
       print "Modify User"
else if choice is 'D' then
       print "Delete User"
else if choice is 'X' then
       print "Exit"
else
       print "Invalid Selection"
```

B. **Using full Java program**, write a Java program that **defines, populates and display** the following list:

1	2	3	4	5
11	12	13	14	15
21	22	23	24	25
31	32	33	34	35
41	42	43	44	45

The output of the program should look like the following:

```
1 2 3 4 5
11 12 13 14 15
21 22 23 24 25
31 32 33 34 35
41 42 43 44 45
```