PPA-5

Assignment: Control Flow Assignment-1

==========

Instructions:

- **Complete this assignment in next 24 hours.**
- **Submit the solution to your leaders.**
- **Ask for help to your leaders if it is really a need.**

==========

{Note: Use While loop for all the codes below}

Program 1. Write a program that print the datatype of variables using if-else Ladder. Take int, char, and float type variable and gives hardcoded value for those variables. Take 1 variable, and use if-else ladder and print the datatype of that variable. Same for other variables.
Input: char a = 'A';
Output: variable is of Char datatype.
Note: don't give direct variable name to if-else ladder or don't compare values inside if-else ladder condition.

```
char ch = 'A'
if(ch)
        printf(variable is of Char datatype);
```

Hint :- Use sizeof Operator.

Program 2: Write a Program that uses Nested Switch Case, Take Real-Time Scenario and write a code around that.

Program 3: Write a Program That Take Input Integer From User, And Print First And Last Digit From That Entered Number Using While Loop.
Input:

Enter Number: 83467

Output:

First Number: 8
Last Number: 7

Program 4. Write a Program That Prints Palindrome Series From Entered Range Using Nested While Loop.

Input:

Enter Start: 100

Enter End: 200

Output: 101 111 121 131 141 151 161 171 181 191.

Program 5. Write a Program To Print Following Pattern. {Note: Take Rows Input From User.}

Input: Enter Number of Rows: 4

Output:

```
0
1   1
2   3   5
8   13  21  34
```

Program 6. Write a Program To Print Following Pattern. {Note: Take rows input from user}

Input: Enter Number of Rows: 5

Output:

```
0   1   4   9   16
    2   6   12  20
        8   15  24
            18  28
                32
```

Program 7. Write a Program To Print Following Pattern. {Note: Take rows input from user}.

Input: Enter Number of Rows: 5

Output:

```
                0
            3   2   5
        4   6   4   10  4
    3   6   9   6   15  6   21
8   4   8   12  8   20  8   28  8
```

Program 8. Write a Program To Print Following Pattern. {Note: Take rows input from user}.
Input: Enter Number of Rows: 5
Output:

```
A   B   C   D   E   F   G   H   I
    =   =   =   =   =   =   =
        E   F   G   H   I
            =   =   =
                I
```

Program 9. Write a Program to check Whether the Entered Number is Strong Number or Not. Until User, not exit. If User Enters 'N' Then Exit The Loop.

Input/Output:

Enter Number: 124
Output: It Is Not a Strong Number

Do you want to Continue ? 'Y'

Enter Number : 145
Output : It Is a Strong Number

Do you want to continue ? 'N'

Exit The Loop.

{Note:
Strong Number: The Sum of Factorial Of Each Digit In Entered Number Is Equal To That Number.
145: 1! + 4! + 5!
: 1 + 24 + 120
: 145
145 == 145, strong number. }

Program 10. Write a Program to check Whether the Entered Number is Perfect Number or Not until User not exit. If User Enters 'N' Then Exit The Loop.

Enter Number: 6

Output:

6 is perfect Number

Do you want to Continue? 'Y'

Enter Number: 12

Output :

12 is not perfect Number

Do you want to continue ? 'N'

Exit The Loop.

{Note:

Perfect Number: The Sum of Divisor Of Entered Number Is Equal To That Number.

6: 1 + 2 + 3 = 6

6 == 6, perfect number}