

# Programming Fundamentals

Assignment – Week 8

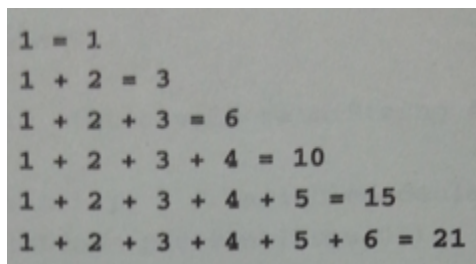
## Exercise 1

Generate the pattern

Sample Run:

**Input number : 6**

**Output**



```
1 = 1
1 + 2 = 3
1 + 2 + 3 = 6
1 + 2 + 3 + 4 = 10
1 + 2 + 3 + 4 + 5 = 15
1 + 2 + 3 + 4 + 5 + 6 = 21
```

## Exercise 2

Write a program `all_digits_odd.cpp` that determines whether every digit of a given positive integer is odd. Print `true` if the number consists entirely of odd digits (1, 3, 5, 7, 9) and `false` if any of its digits are even (0, 2, 4, 6, 8).

For example, • **On input 135319**, the output should be **true**.

• **On input 9145293**, the output should be **false**.

**Keep asking the user for input until user input is -1.**

## Exercise 3

Write a program that converts a hexadecimal digit into a decimal value. (with the help of ASCII Value)

<b>Input:</b> Enter Hex Char: A <b>Output:</b> Decimal number is <b>10</b>	<b>Input:</b> Enter Hex Char: F <b>Output:</b> Decimal number is <b>15</b>	<b>Input:</b> Enter Hex Char: 7 <b>Output:</b> Decimal number is <b>7</b>
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#### Exercise 4

Input :

Enter number : 5

Output

```
****1
***121
**12321
*1234321
123454321
```

