Ahsanullah University of Science and Technology, Bangladesh

CSE 1102: Elementary Structured Programming Lab (Fall 24)

Practice Problems, Control Statements (Loops)

SL	Problem statement	
1	**Write a C program to print all odd numbers between 1 to n.** **Input :**10 **Output:** 1,3,5,7,9	
2	**Write a C program to print all natural numbers in reverse (from n to 1). - using a while loop.** **Input:** 5 **Output:** 5 4 3 2 1	
3	**Write a C program to print a multiplication table of any number.** **Input:5** **Output:** 5x1=5 5X2=10 . 5X10=50	
4	**Write a C program that will print the sum of the following series.** **1+3+...+(2n+1)** **Input 5:** **Output: 1+3+5+7+9+11 = 36**	
5	**Print the following series and find the result of the series.** **Input: 5** **Output: 1+8+27+64+125 = 225**	
6	**Print the following series and find the result of the series.** **Input: 5** **Output: 1 + 2*4*6 + 3*6*9 + 4*8*12 + 5*10*15 = 1345**	
7	**Check whether the given number is prime or not.** **Input: 20** **Output: 20 is not a prime number.**	
8	**Print the Fibonacci Series up to a certain number.** **(The Fibonacci sequence is a sequence where the next term is the sum of the previous two terms. The first two terms of the Fibonacci sequence are 0 and 1.)** **Input: 8** **Output: 0 1 1 2 3 5 8**	
9	**Write a C program for printing the following pattern :** **Input:5** **Output:** *	

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10	**Write a C program for printing the following pattern :** **Input:5** **Output:** **1** **22** **333** **4444** **55555**	
11	**Write a C program for printing the following pattern :** **Input:5** **Output:** **1** **12** **123** **1234** **12345**	
12	**Write a C program for printing the following pattern :** **Input:5** ********* ******** ******* ****** *****	
13	**Write a C program for printing the following pattern :** **Input:5** ***** ******* ********* *********** *************	
14	**Write a C program for printing the following pattern :** **Input:5**	

```
        *
       ***
      *****
     *******
    *********
```

| 15 | **Write a C program for printing the following pattern :**<br>**Input:5**<br><br>**Output:**<br><br>```
    *
   ***
  *****
 *******
*********
 *******
  *****
   ***
    *
``` | |
|---|---|---|
| 16 | **Write a C program for printing the following pattern :**<br>**Input:5**<br>**Output:**<br>```
    1
   2 3 2
  3 4 5 4 3
 4 5 6 7 6 5 4
5 6 7 8 9 8 7 6 5
``` | |
| 17 | **Write a C program for printing the following pattern :**
Input:5
Output:
A
BB
CCC
DDDD
EEEEE
DDDD
CCC
BB
A | |
| 18 | **Write a C program for printing the following pattern :**
Input: 5
Output: | |

```
123456789
 1234567
  89123
   456
    7
```

Letter	ASCII Code	Binary	Letter	ASCII Code	Binary
a	097	01100001	A	065	01000001
b	098	01100010	B	066	01000010
c	099	01100011	C	067	01000011
d	100	01100100	D	068	01000100
e	101	01100101	E	069	01000101
f	102	01100110	F	070	01000110
g	103	01100111	G	071	01000111
h	104	01101000	H	072	01001000
i	105	01101001	I	073	01001001
j	106	01101010	J	074	01001010
k	107	01101011	K	075	01001011
l	108	01101100	L	076	01001100
m	109	01101101	M	077	01001101
n	110	01101110	N	078	01001110
o	111	01101111	O	079	01001111
p	112	01110000	P	080	01010000
q	113	01110001	Q	081	01010001
r	114	01110010	R	082	01010010
s	115	01110011	S	083	01010011
t	116	01110100	T	084	01010100
u	117	01110101	U	085	01010101
v	118	01110110	V	086	01010110
w	119	01110111	W	087	01010111
x	120	01111000	X	088	01011000
y	121	01111001	Y	089	01011001
z	122	01111010	Z	090	01011010