October 19, 2017 Thursday

Lab 8

Functions in C

Marks: 5

Question 01:

Generate following output:
Add up as many numbers as user wants in a function **addup()** and display the sum in **main().**

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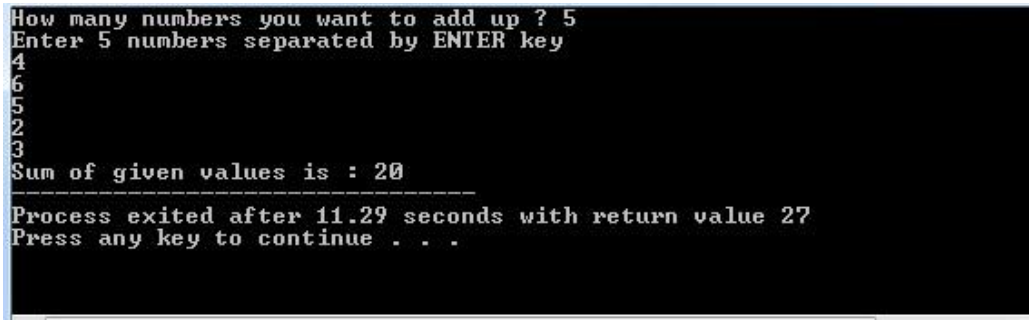


Question 02:

Bob's Discount Bolts charges the following prices:

5 cents per bolt
3 cents per nut
1 cent per washer

Write a program that asks the user for the number of bolts, nuts, and washers in their purchase and then calculates and prints out the total. As an added feature, the program checks the order. A correct order must have at least as many nuts as bolts and at least twice as many washers as blots, otherwise the order has an error. For an error the program writes out "Check the Order: too few nuts" or "Check the Order: too few washers" as appropriate. Both error messages are written if the order has both errors. If there are no errors the program writes out "Order is OK."

Number of bolts:	**12**
Number of nuts:	**8**
Number of washers:	**24**
Check the Order:	**too few nuts**
Total cost:	**108**

Question 03:

Teacher asks the student to check the whether the input number is divisible by 7 or not. For checking the divisibility, take last digit and double it take the rest of the digits and subtract the doubled last digit repeat until result is 7, -7 or 0. Write a function that takes integer and check its divisible by 7 or not.
For Eg:
10976 -> 1097-12 = 1085 -> 108-10 = 98 -> 9-16 = -7
49 -> 4 - 18 = 14 -> 1 - 8 = -7

Question 04:
Point out the errors, if any, in the following programs:

(a)
```
main( )
{
    int i = 3, j = 4, k, l ;     k =
addmult ( i, j ) ;     l =
addmult ( i, j ) ;     printf (
"\n%d %d", k, l ) ;
}

addmult ( int ii, int jj )
{    int kk, ll ;
    kk = ii + jj ;
    ll = ii * jj ;
    return ( kk, ll ) ;
}
```

(b)
```
main( )
{    int a ;   a =
message( ) ;
}

message( ) {
    printf ( "\nViruses are written in C" ) ;
    return ;
}
```

(c)
```
main( )
{
    float a = 15.5 ;
    char ch = 'C' ;
    printit ( a, ch ) ;
}
```

```
printit ( a, ch ) {
    printf ( "\n%f %c", a, ch ) ;
}
```

(d)

```
main( )
{
    message( ) ;
    message( ) ;
}

message( ) ;
{
    printf ( "\nPraise worthy and C worthy are synonyms" ) ; }
```

(e)

```
main( )
{
    let_us_c( )
    {
            printf ( "\nC is a Cimple minded language !" ) ;
    printf ( "\nOthers are of course no match !" ) ;
    }
}
```

(f)

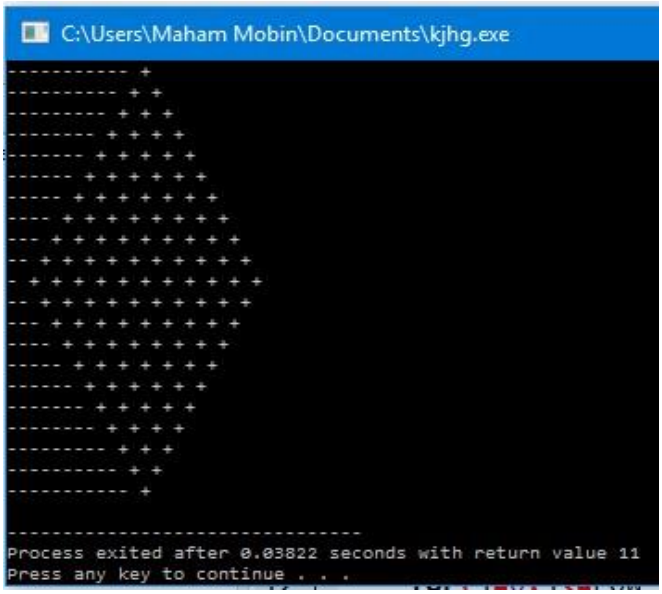
```
main( ) {
    message( message ( ) ) ;
}

void message( )
{
    printf ( "\nPraise worthy and C worthy are synonyms" ) ; }
```

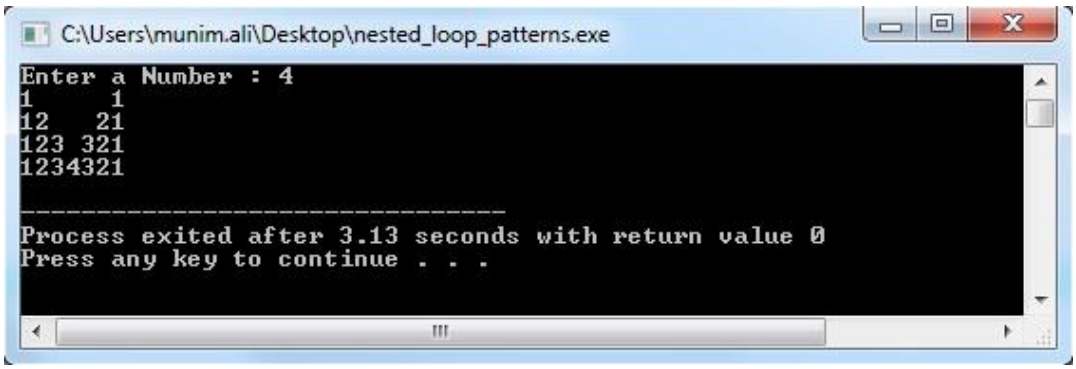
Question 05:

Write a function that takes N as argument and print shapes. Shape A) should have 2N+1 rows as shown below here N=10

A)



B) Generate the following output



C) Write a function Inverted full pyramid using *