

# C PROGRAMMING ASSIGNMENT: 10

DATE: 26.11.21

SUBMITTED BY: -

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BRANCH: CSE

SECTION: B22

ROLL NO.: 21052258

## Program 1: Pattern display 1

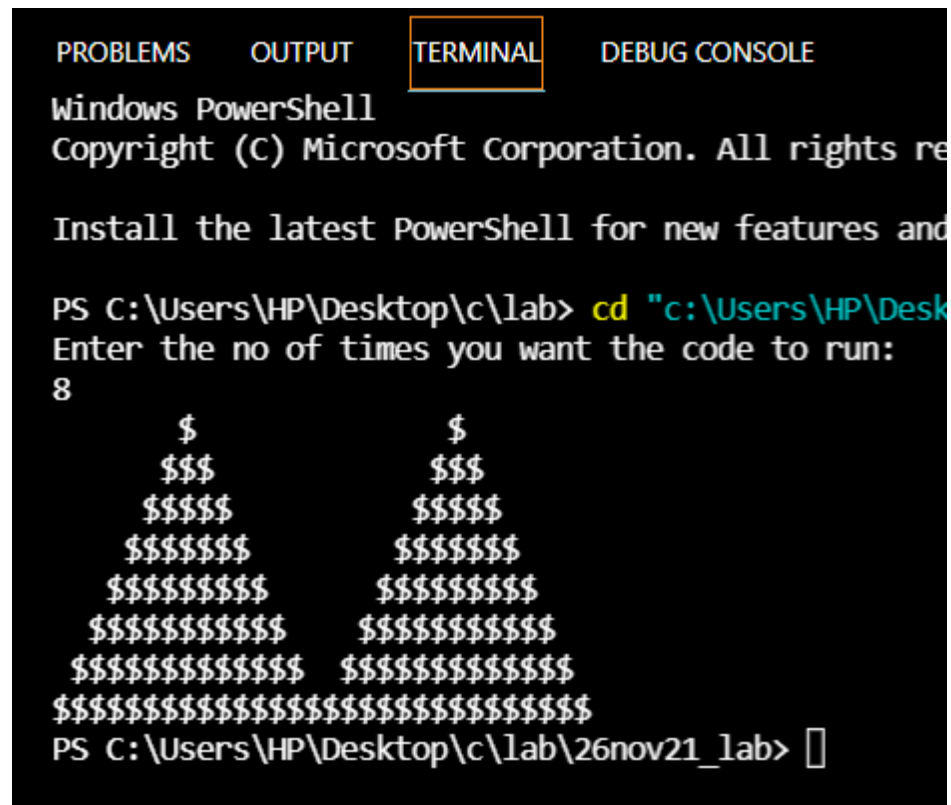
Code:

```
#include<stdio.h>

int main(int argc, char const *argv[])
{
    int n;
    printf("Enter the no of times you want the code to run:\n");
    scanf("%d",&n);
    for (int i = 0; i < n; i++){
        for (int j = 0; j < n-(i+1); j++)
        {
            printf(" ");
        }
        for (int j = 0; j < 2*i+1; j++)
        {
            printf("$");
        }
        for (int j = 0; j < n-(i+1); j++)
        {
            printf(" ");
        }
        for (int j = 0; j < n-(i+1); j++)
        {
            printf(" ");
        }
        for (int j = 0; j < 2*i+1; j++)
        {
            printf("$");
        }
        printf("\n");
    }
```

```
}  
  
return 0;  
}
```

Output:



The screenshot shows a Windows PowerShell terminal window with the following content:

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE  
Windows PowerShell  
Copyright (C) Microsoft Corporation. All rights reserved.  
  
Install the latest PowerShell for new features and  
improvements: https://aka.ms/WindowsPowerShell  
PS C:\Users\HP\Desktop\c\lab> cd "c:\Users\HP\Desktop\c\lab\26nov21_lab"  
Enter the no of times you want the code to run:  
8  
  
      $      $  
    $$$    $$$  
  $$$$$  $$$$$  
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PS C:\Users\HP\Desktop\c\lab\26nov21_lab> 
```

## Program 2: Pattern display 2

Code:

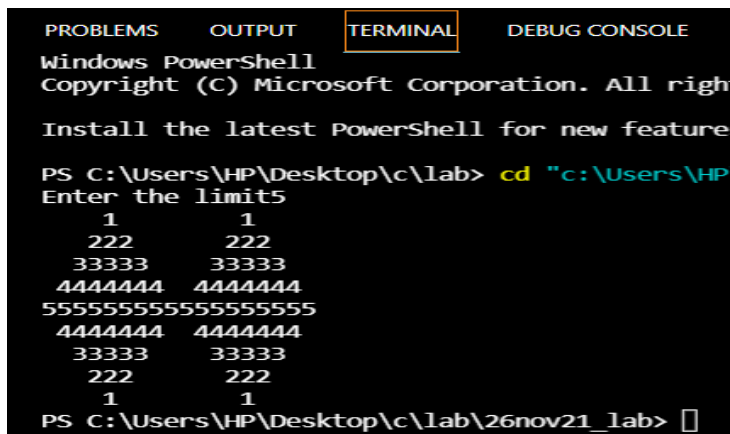
```
#include<stdio.h>

int main(int argc, char const *argv[])
{
    int n;
    printf("Enter the limit");
    scanf("%d", &n);

    for (int i = 0; i < 5; i++){
        for (int j = 0; j < 5-(i+1); j++)
        {
            printf(" ");
        }
        for (int j = 0; j < 2*i+1; j++)
        {
            printf("%d",i+1);
        }
        for (int j = 0; j < 5-(i+1); j++)
        {
            printf(" ");
        }
        for (int j = 0; j < 5-(i+1); j++)
        {
            printf(" ");
        }
        for (int j = 0; j < 2*i+1; j++)
        {
            printf("%d",i+1);
        }

        printf("\n");
    }
```

Output:



### Program 3: Pattern display 3

Code:

```
#include<stdio.h>
int main()
{
    int i,j,n,k;
    printf("\nEnter the number of rows of the follwing pattern to be
    printed: ");
    scanf("%d",&n);
    int sp=(n*2)-2;
    for(i=0;i<n;i++)
    {
        for(j=0;j<i*2+1;j++)
            printf("$");

        for(j=sp;j>0;j--)
            printf(" ");

        for(j=0;j<i*2+1;j++)
            printf("$");

        for(j=sp;j>0;j--)
            printf(" ");

        for(j=0;j<i*2+1;j++)
            printf("$");

        sp-=2;
        printf("\n");
    }
    sp=2;
    for(i=n-1;i>0;i--)
    {
```

```

for(j=0;j<i*2-1;j++)
    printf("$");

for(j=0;j<sp;j++)
    printf(" ");

for(j=0;j<i*2-1;j++)
    printf("$");

for(j=0;j<sp;j++)
    printf(" ");

for(j=0;j<i*2-1;j++)
    printf("$");

    sp+=2;
    printf("\n");
}
printf("\n");
return 0;
}

```

Output:

```

PROBLEMS  OUTPUT  TERMINAL  DEBU
Windows PowerShell
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PS C:\Users\HP\Desktop\c\lab> cd "

Enter the number of rows of the fo
$      $      $
$$$    $$$    $$$
$$$$$  $$$$$  $$$$$
$$$$$$$ $$$$$$ $$$$$$
$$$$$$$$ $$$$$$$$ $$$$$$$$
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$$$$$$$$$ $$$$$$$$ $$$$$$$$
$$$$$$$  $$$$$$  $$$$$$
$$$$$    $$$    $$$
$$$      $      $
$        $        $

```

## Program 4: Pattern display 4

Code:

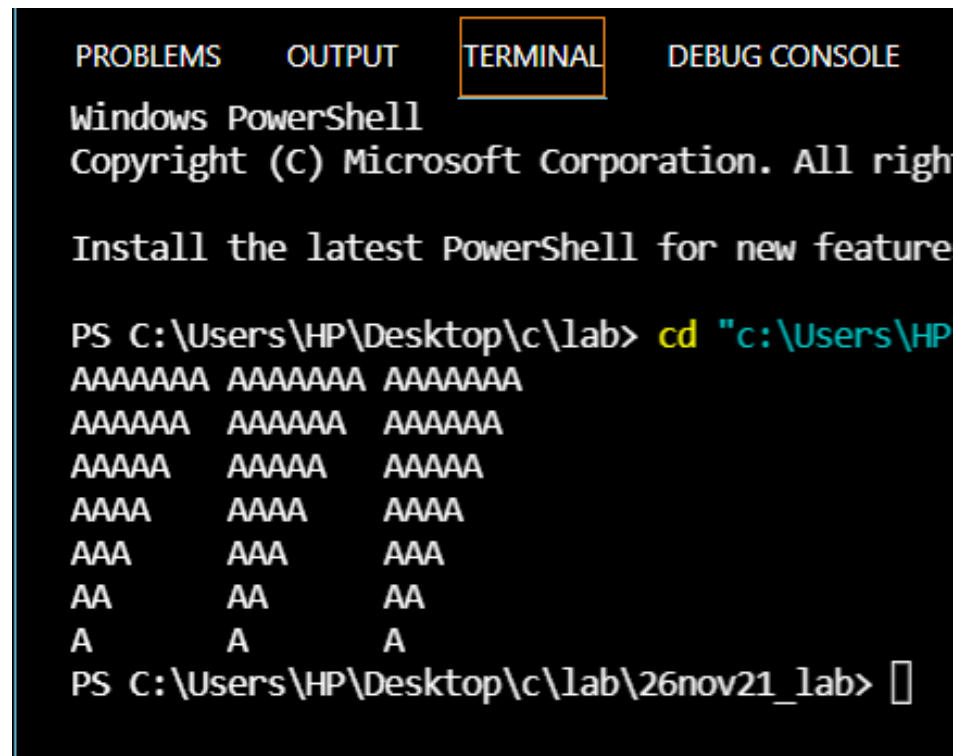
```
#include<stdio.h>
int main(int argc, char const *argv[])
{
    for(int i = 1; i <= 7; i++)
    {
        for(int j=1;j<=7-i+1;j++)
        {
            printf("A");
        }
        for(int j=0;j<i;j++)
        {
            printf(" ");
        }
        for(int j=1;j<=7-i+1;j++)
        {
            printf("A");
        }
        for(int j=0;j<i;j++)
        {
            printf(" ");
        }
        for(int j=1;j<=7-i+1;j++)
        {
            printf("A");
        }
        for(int j=0;j<i;j++)
        {
            printf(" ");
        }

        printf("\n");
    }
}
```



```
}  
    return 0;  
}
```

Output:



The screenshot shows a Windows PowerShell terminal window with the 'TERMINAL' tab selected. The window displays the following text:

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE  
Windows PowerShell  
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See https://aka.ms/WindowsPowerShell for details.  
  
PS C:\Users\HP\Desktop\c\lab> cd "c:\Users\HP\Desktop\c\lab\26nov21_lab"  
AAAAAAAA AAAAAAA AAAAAAA  
AAAAAA  AAAAAA  AAAAAA  
AAAAA   AAAAA  AAAAA  
AAAA    AAAA   AAAA  
AAA     AAA    AAA  
AA      AA     AA  
A       A      A  
PS C:\Users\HP\Desktop\c\lab\26nov21_lab> █
```

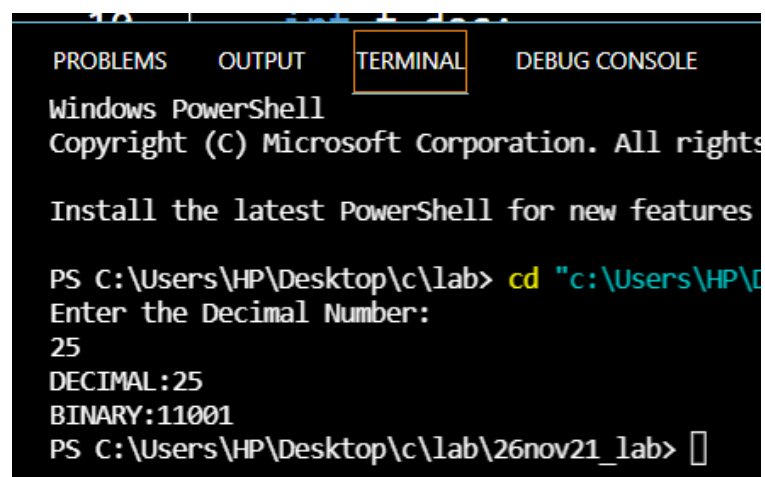
## Program 5: Decimal to binary

Code:

```
//convert from decimal to binary
#include<stdio.h>
int main()
{
    int dec,rem,i=1;
    int bin=0;

    printf("\nEnter the Decimal Number:");
    scanf("%d",&dec);
    int t=dec;
    while(dec>0)
    {
        rem=dec%2;
        dec=dec/2;
        bin=bin + (i*rem);
        i=i*10;
    }
    printf("\n%d DECIMAL \n%d BINARY",t,bin);
    printf("\n");
    return 0;
}
```

Output:



```
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PS C:\Users\HP\Desktop\c\lab> cd "c:\Users\HP\Desktop\c\lab\26nov21_lab"
Enter the Decimal Number:
25
DECIMAL:25
BINARY:11001
PS C:\Users\HP\Desktop\c\lab\26nov21_lab> 
```

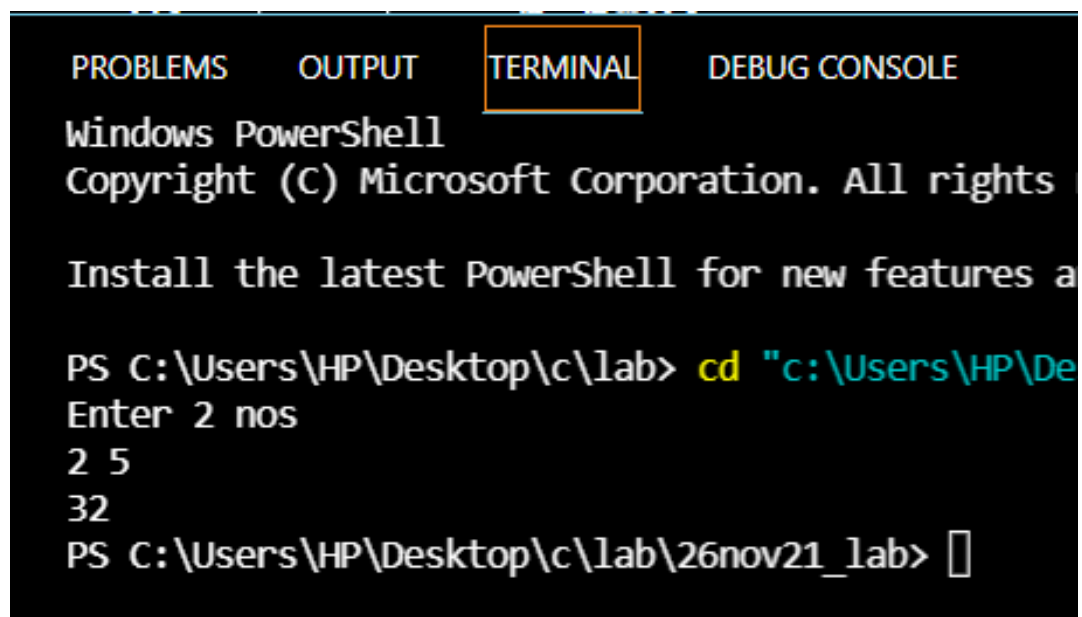
### Program 6: Write a program to find x raised to power y

Code:

```
#include <stdio.h>
// x^y
int main(int argc, char const *argv[])
{
    int x,y,r=1;
    printf("Enter 2 numbers\n");
    scanf("%d %d", &x, &y);
    for (int i = 1; i <= y; i++)
    {
        r=r*x;
    }
    printf("%d\n", r);

    return 0;
}
```

Output:



The screenshot shows a Windows PowerShell terminal window with the following content:

```
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PS C:\Users\HP\Desktop\c\lab> cd "c:\Users\HP\Desktop\c\lab\26nov21_lab"
Enter 2 nos
2 5
32
PS C:\Users\HP\Desktop\c\lab\26nov21_lab> █
```