

C PROGRAMMING ASSIGNMENT:

9

DATE: 25.11.21

SUBMITTED BY: -

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BRANCH: CSE

SECTION: B22

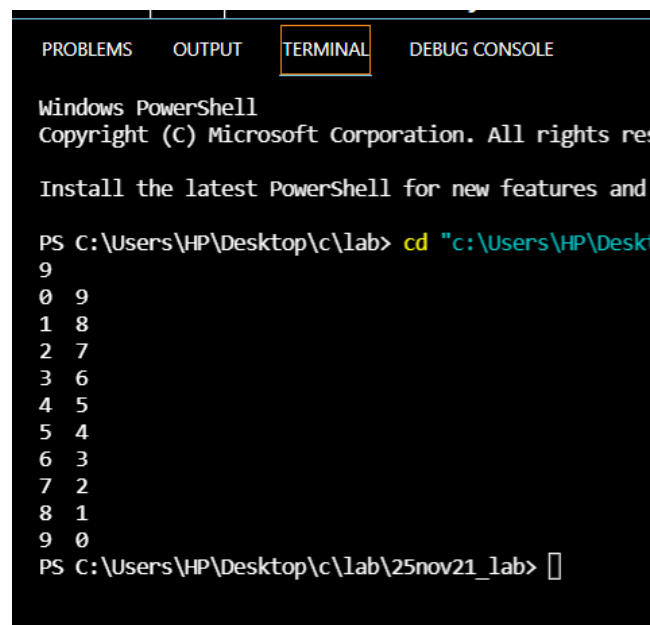
ROLL NO.: 21052258

Program 1: Print 0 to 9 and 9 to 0 in a single loop.

Code:

```
#include <stdio.h>
// 0 to 9 and 9 to 0
int main(int argc, char const *argv[])
{
    int a, n;
    scanf("%d", &n);
    for (int i = 0; i <= n; i++)
    {
        a = n - i;
        printf("%d  %d\n", i, a);
    }
    return 0;
}
```

Output:



```
Windows PowerShell
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improvements: https://aka.ms/powershell

PS C:\Users\HP\Desktop\c\lab> cd "c:\Users\HP\Desktop\c\lab\25nov21_lab"
9
0 9
1 8
2 7
3 6
4 5
5 4
6 3
7 2
8 1
9 0
PS C:\Users\HP\Desktop\c\lab\25nov21_lab> 
```

Program 2: Write a program to enter 10 numbers and find the number of odd numbers entered and print their sum.

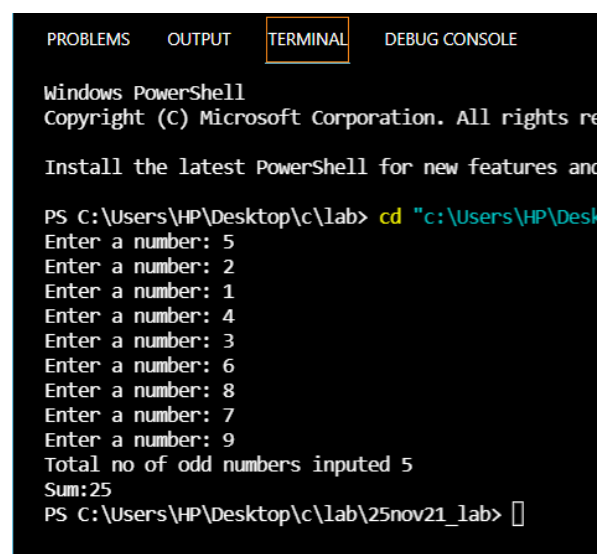
Code:

```
#include <stdio.h>

// odd numbers and their sum

int main(int argc, char const *argv[])
{
    int c = 0, s = 0;
    for (int i = 0; i < 10; i++)
    {
        printf("Enter a number: ");
        scanf("%d", &i);
        if ((i % 2) != 0)
        {
            c = c + 1;
            s = s + i;
        }
    }
    printf("Total no of odd numbers inputed %d\n", c);
    printf("Sum:%d", s);
    return 0;
}
```

Output:



```
Windows PowerShell
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PS C:\Users\HP\Desktop\c\lab> cd "c:\Users\HP\Desktop\c\lab\25nov21_lab"
Enter a number: 5
Enter a number: 2
Enter a number: 1
Enter a number: 4
Enter a number: 3
Enter a number: 6
Enter a number: 8
Enter a number: 7
Enter a number: 9
Total no of odd numbers inputed 5
Sum:25
PS C:\Users\HP\Desktop\c\lab\25nov21_lab>
```

Program 3: Write a program to find sum of numbers divisible by 3 with in a range of 1 to 100

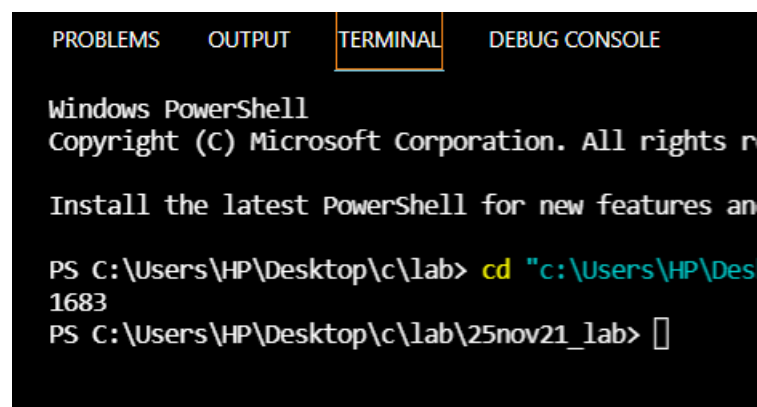
Code:

```
#include<stdio.h>

int main(int argc, char const *argv[])
{
    int a=0;

    for (int i = 1; i <=100; i++)
    {
        if(i%3==0)
        {
            a=a+i;
        }
    }
    printf("%d",a);
    return 0;
}
```

Output:



```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

Windows PowerShell
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See 'Get-Command Get-ExecutionPolicy' for more details.

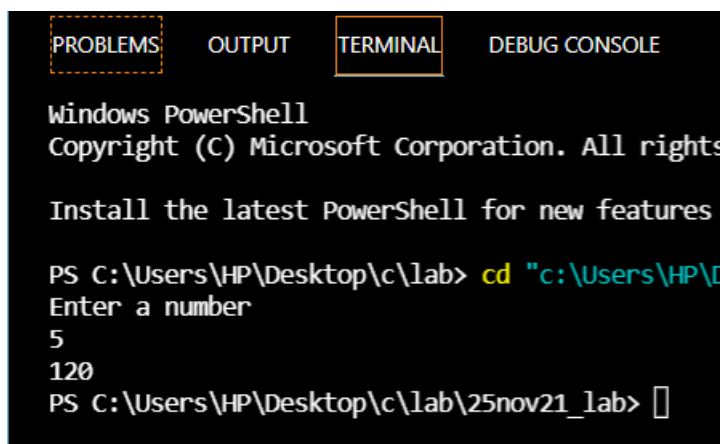
PS C:\Users\HP\Desktop\c\lab> cd "c:\Users\HP\Desktop\c\lab\25nov21_lab"
PS C:\Users\HP\Desktop\c\lab\25nov21_lab> 1683
```

Program 4: Write a program to find factorial of a number.

Code:

```
#include<stdio.h>
//factorial
int main(int argc, char const *argv[])
{
    int n,f=1;
    printf("Enter a number\n");
    scanf("%d",&n);
    for (int i = 1; i <=n; i++)
    {
        f=f*i;
    }
    printf("%d",f);
    return 0;
}
```

Output:



The screenshot shows a Windows PowerShell terminal window with four tabs at the top: PROBLEMS, OUTPUT, TERMINAL, and DEBUG CONSOLE. The TERMINAL tab is active. The terminal output is as follows:

```
Windows PowerShell
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PS C:\Users\HP\Desktop\c\lab> cd "c:\Users\HP\Desktop\c\lab\25nov21_lab"
Enter a number
5
120
PS C:\Users\HP\Desktop\c\lab\25nov21_lab> 
```

Code:

Output:

6

Program 6: Write a program to find sum of digits.

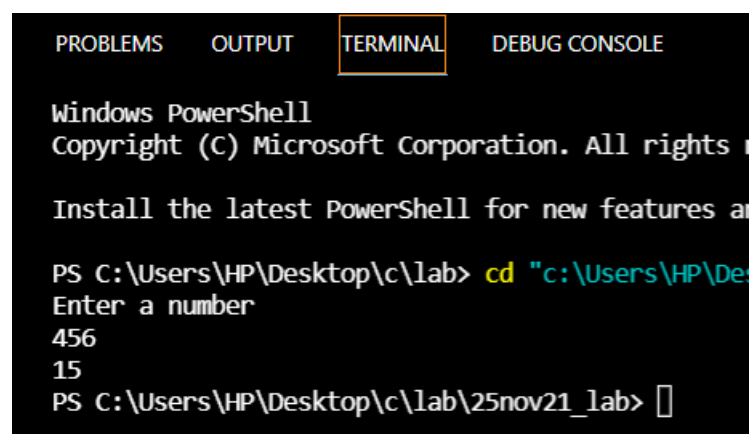
Code:

```
#include<stdio.h>

int main(int argc, char const *argv[])
{
    int n,a=0,z;
    printf("Enter a number\n");
    scanf("%d",&n);
    for (int i = 0; i <= n; i++)
    {
        z=n%10;
        a=a+z;
        n=n/10;
    }
    printf("%d",a);

    return 0;
}
```

Output:



The screenshot shows a Windows PowerShell terminal window with four tabs: PROBLEMS, OUTPUT, TERMINAL (which is selected and highlighted with a yellow border), and DEBUG CONSOLE. The terminal output includes the Windows PowerShell header, copyright information, and a prompt to install the latest PowerShell. The user has navigated to the directory 'C:\Users\HP\Desktop\c\lab' and executed the program. The program prompts 'Enter a number' and the user has entered '456'. The program then outputs '15'. The prompt 'PS C:\Users\HP\Desktop\c\lab\25nov21_lab>' is visible at the bottom.

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

Windows PowerShell
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PS C:\Users\HP\Desktop\c\lab> cd "c:\Users\HP\Desktop\c\lab"
Enter a number
456
15
PS C:\Users\HP\Desktop\c\lab\25nov21_lab> 
```

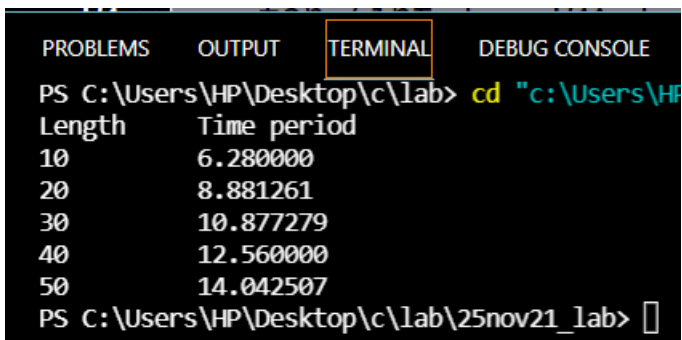
Program 7: Write a program to display time period of a simple pendulum at 10 20 30 40 and 50 seconds.

Code:

```
#include <stdio.h>
#include <math.h>
#define pi 3.14
#define g 10
// wap to disp time period of a simple pendulum
int main(int argc, char const *argv[])
{
    float t;
    printf("Length      Time period\n");
    for (int l = 10; l <= 50; l += 10)
    {
        t = 2 * pi * sqrt(l / g);
        printf("%d      %f\n", l, t);
    }

    return 0;
}
```

Output:



```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE
PS C:\Users\HP\Desktop\c\lab> cd "c:\Users\HP\Desktop\c\lab\25nov21_lab"
Length    Time period
10        6.280000
20        8.881261
30        10.877279
40        12.560000
50        14.042507
PS C:\Users\HP\Desktop\c\lab\25nov21_lab> 
```