

CSB Lab-5

Q1) Write a program to find whether a consonant is a vowel or consonant using switch statement.

```
#include<stdio.h>
int main()
{
    char alpha;
    printf("Enter the alphabet: ");
    scanf("%c", &alpha);

    switch (alpha){
        case 'A' : printf("Vowel.");
        break;
        case 'E' : printf("Vowel.");
        break;
        case 'I' : printf("Vowel.");
        break;
        case 'O' : printf("Vowel.");
        break;
        case 'U' : printf("Vowel.");
        break;
        case 'a' : printf("Vowel.");
        break;
        case 'e' : printf("Vowel.");
        break;
        case 'i' : printf("Vowel.");
        break;
        case 'o' : printf("Vowel.");
        break;
        case 'u' : printf("Vowel.");
        break;
        default : printf("Consonant.");
        break;
    }
}
```

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

PS G:\Witin\Code Blocks\Calm> gcc Vowel.c
PS G:\Witin\Code Blocks\Calm> .\a.exe
Enter the alphabet: i
Vowel.
PS G:\Witin\Code Blocks\Calm> gcc Vowel.c
PS G:\Witin\Code Blocks\Calm> .\a.exe
Enter the alphabet: P
Consonant.
PS G:\Witin\Code Blocks\Calm> 
```

Q2) Write a program to print day name using switch case.

```
#include<stdio.h>
int main()
{
    int day;
    printf("Enter the no of day: ");
    scanf("%d", &day);
    switch (day){
        case 1 : printf("Monday.");
        break;
        case 2 : printf("Tuesday.");
        break;
        case 3 : printf("Wednesday.");
        break;
        case 4 : printf("Thursday.");
        break;
        case 5 : printf("Friday.");
        break;
        case 6 : printf("Saturday.");
        break;
        case 7 : printf("Sunday.");
        break;
        default : printf("Invalid Input!");
        break;
    }
}
```

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

PS G:\Nitin\Code Blocks\Calm> gcc Day.c
PS G:\Nitin\Code Blocks\Calm> .\a.exe
Enter the no of day: 2
Tuesday.
PS G:\Nitin\Code Blocks\Calm> 
```

Q3) Write a program to check whether a number is positive, negative or zero using switch statement.

```
#include<stdio.h>
int main()
{
    int num, k;
    printf("Enter the number: ");
    scanf("%d", &num);
    if (num>0)
    {k = 1;}
    else if (num<0)
    {k = 2;}
    switch (k){
        case 1 : printf("Positive");
        break;
        case 2 : printf("Negative");
        break;
        default : printf("Zero");
        break;
    }
}
```

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

PS G:\Nitin\Code Blocks\Calm> gcc Sign.c
PS G:\Nitin\Code Blocks\Calm> .\a.exe
Enter the number: 24
Positive
PS G:\Nitin\Code Blocks\Calm> .\a.exe
Enter the number: -16
Negative
PS G:\Nitin\Code Blocks\Calm> .\a.exe
Enter the number: 0
Zero
```

Q4) Write a program to

- Print positive integers from 1 to 10.

```
#include<stdio.h>

int main()
{
    for (int i = 1; i<11; i++)
    {printf("%d\n", i);}
}
```

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

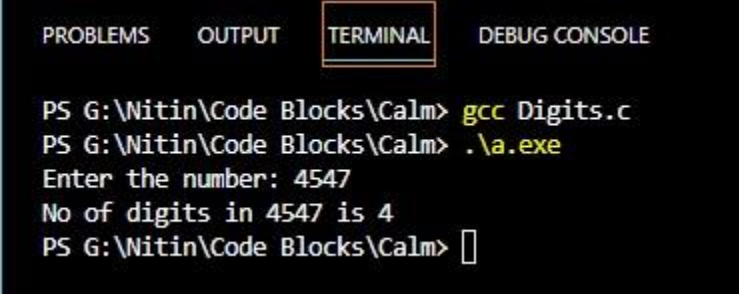
PS G:\Nitin\Code Blocks\Calm> gcc Integers.c
PS G:\Nitin\Code Blocks\Calm> .\a.exe
1
2
3
4
5
6
7
8
9
10
```

- Count number of digits in a given integer.

```
#include<stdio.h>

int main()
{
    int num;
    printf("Enter the number: ");
    scanf("%d", &num);

    int dummy = num, dig = 0;
    while (dummy!=0)
    {
        dummy = dummy/10;
        dig++;
    }
    printf("No of digits in %d is %d", num, dig);
}
```



The screenshot shows a terminal window with four tabs: PROBLEMS, OUTPUT, TERMINAL (which is selected and highlighted with a red box), and DEBUG CONSOLE. The terminal text shows the user compiling a file named 'Digits.c' with 'gcc' and running the resulting executable 'a.exe'. The program prompts for a number, and the user enters '4547'. The program outputs 'No of digits in 4547 is 4'.

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

PS G:\Witin\Code Blocks\Calm> gcc Digits.c
PS G:\Witin\Code Blocks\Calm> .\a.exe
Enter the number: 4547
No of digits in 4547 is 4
PS G:\Witin\Code Blocks\Calm> 
```

- Print number in reverse order with a difference of 2.

```
#include<stdio.h>
int main()
{
    int num, new;
    printf("Where do you want to start from? ");
    scanf("%d", &num);

    for (int ditto = num; ditto > 0; ditto = ditto - 2)
    {
        new = ditto;
        printf("%d\t", new);
    }
}
```

```
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

PS G:\Witin\Code Blocks\Calm> gcc Reverse.c
PS G:\Witin\Code Blocks\Calm> .\a.exe
Where do you want to start from? 12
12      10      8      6      4      2
PS G:\Witin\Code Blocks\Calm> 
```

- Print the sum of digits of a number using for loop.

```
#include<stdio.h>

int main()
{
    int num, rem, sum = 0;
    printf("Enter the number: ");
    scanf("%d", &num);

    for (int dummy = num; dummy>0; dummy = dummy/10)
    {
        rem = dummy%10;
        sum = sum + rem;
    }
    printf("Sum of digits of %d is %d", num, sum);
}
```

```
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

PS G:\Witin\Code Blocks\Calm> gcc Sum.c
PS G:\Witin\Code Blocks\Calm> .\a.exe
Enter the number: 3627
Sum of digits of 3627 is 18
PS G:\Witin\Code Blocks\Calm> 
```

- Check whether a number is palindrome or not.

```
#include<stdio.h>

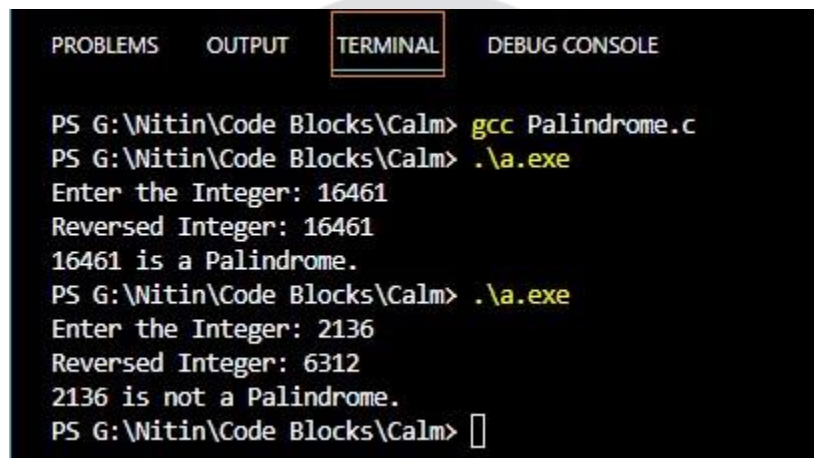
int main()
{
```

```

int num;
printf("Enter the Integer: ");
scanf("%d", &num);

int new = 0;
for (int ditto = num; ditto > 0; ditto = ditto/10)
{
    new = new*10 + (ditto%10);
}
printf("Reversed Integer: %d\n", new);
if (new == num)
{printf("%d is a Palindrome.", num);}
else
{printf("%d is not a Palindrome.", num);}
}

```



The screenshot shows a terminal window with the following content:

```

PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

PS G:\Witin\Code Blocks\Calm> gcc Palindrome.c
PS G:\Witin\Code Blocks\Calm> .\a.exe
Enter the Integer: 16461
Reversed Integer: 16461
16461 is a Palindrome.
PS G:\Witin\Code Blocks\Calm> .\a.exe
Enter the Integer: 2136
Reversed Integer: 6312
2136 is not a Palindrome.
PS G:\Witin\Code Blocks\Calm> 

```

- Generate Fibonacci series.

```

#include<stdio.h>

int main()
{
    int dig, fib0 = 1, fib1 = 1, fib2 = 0;
    printf("How many Fibonacci Numbers are required? ");
    scanf("%d", &dig);

    if (dig>=1)
    {printf("%d\n", fib0);}
    if (dig>=2)
    {printf("%d\n", fib1);}
    else

```

```
{printf("Invalid Input!");}  
  
for (int i = 1; i < dig-1; i++)  
{  
    fib2 = fib1 + fib0;  
    fib0 = fib1;  
    fib1 = fib2;  
    printf("%d\n", fib2);  
}  
}
```

PROBLEMS OUTPUT **TERMINAL** DEBUG CONSOLE

```
PS G:\Witin\Code Blocks\Calm> gcc Fibonacci.c  
PS G:\Witin\Code Blocks\Calm> .\a.exe  
How many Fibonacci Numbers are required? 5  
1  
1  
2  
3  
5
```

