Assignment 3

// Q1. print numbers from 1 to 10

```
int no = 1;
while (no<11)
{
   printf("Your no is %d\n", no);
   no++;
}
```

Output:

```
PS C:\Users\manis\OneDrive\Desktop\New folder\output> & .\'demo.exe'
Your no is 1
Your no is 2
Your no is 3
Your no is 4
Your no is 5
Your no is 6
Your no is 7
Your no is 8
Your no is 9
Your no is 10
```

//Q2. Print table for the given number

```
int no = 1;
int table = 4;
int multiplication;
while (no<11)
{
   multiplication = no * table;
   printf("Table : %d * %d = %d \n", table, no, multiplication);
   no++;
}
```

Output:

```
PS C:\Users\manis\OneDrive\Desktop\New folder\output> & .\'demo.exe'
Table : 4 * 1 = 4
Table : 4 * 2 = 8
Table : 4 * 3 = 12
Table : 4 * 4 = 16
Table : 4 * 5 = 20
Table : 4 * 6 = 24
Table : 4 * 7 = 28
Table : 4 * 8 = 32
Table : 4 * 9 = 36
Table : 4 * 10 = 40
```

// Q3. Calculate sum of numbers in the given range

```
int num1 = 1;
int num2 = 5;
int sum = 0;

while (num1 <= num2)
{
   sum += num1;
   num1++;
}
printf("sum is: %d", sum);
```

Output:

```
PS C:\Users\manis\OneDrive\Desktop\New folder\output> & .\'demo.exe'
sum is: 15
```

// Q4. Check no is prime or not.

```
int no = 13;
int status = 0;
int i =2;

while (i<no)
{
   if (no%i==0)
   {
      status = 1;
      break;
   }
   i++;
}

if (no<2){
   printf("No %d is not a prime no", no);
} else if (status == 0){
      printf("No %d is a prime no", no);
} else {
   printf("No %d is not a prime no", no);
}
```

Output:

```
PS C:\Users\manis\OneDrive\Desktop\New folder\output> & .\'demo.exe'
No 13 is a prime number
```

// Q5. Check number is Armstrong or not?

```
int no = 153;
int original_no = no;
int temp = no;
int sum = 0;
int digits = 0;

while (temp>0)
{
   temp = temp/10;
   digits++;
}

temp = no;
int digit = 1;

while (temp>0)
{
   digit = temp % 10;
   int i = 0;
   int power =1;

   while (i<digits)
   {
```

```
        power = power * digit;
        i++;
    }

    sum += power;
    temp = temp/10;
}

if (original_no==sum)
{
    printf("%d is armstrong no", sum);
} else
{
    printf("%d is not armstrong no", sum);

}
```

Output:

```
PS C:\Users\manis\OneDrive\Desktop\New folder\output> & .\'demo.exe'
153 is armstrong no
```

// Q6. Check number is perfect or not.

```
int no = 28;
int temp = no;
int i = 1;
int reminder = 0;
int sum = 0;

while (i <= temp / 2) {

   reminder = temp % i;
   if (reminder == 0) {
      sum += i;
   }
   i++;
}

if (no == sum) {
   printf("%d is a perfect\n", no);
} else {
   printf("%d is not perfect\n", no);
}
```

Output:

```
PS C:\Users\manis\OneDrive\Desktop\New folder\output> & .\'demo.exe'
28 is a perfect
```

// Q7. find factorial or number

```
int no =5;
int factorial = 1;
while (no>=1)
{
   factorial = factorial * no;
   no--;
}

printf("Factorial of no: %d", factorial);
```

Output:

```
PS C:\Users\manis\OneDrive\Desktop\New folder\output> & .\'demo.exe'
Factorial of no: 120
```

// Q8. Check number is strong or not.

```
int no = 145;
int temp = no;
int digit = 0;
int sum = 0;

while (temp > 0) {
   digit = temp % 10;

   int i = 1;
   int factorial = 1;
   while (i <= digit) {
      factorial *= i;
      i++;
   }

   sum += factorial;
   temp /= 10;
}
if (no == sum) {
   printf("%d is a Strong Number\n", no);
} else {
   printf("%d is not a Strong Number\n", no);
}
```

Output:

```
PS C:\Users\manis\OneDrive\Desktop\New folder\output> & .\'demo.exe'
145 is a Strong Number
```

// Q9. Check the no is Palindrome or not

```
int no = 151;
int temp = no;
int remember = 0;
int reverse = 0;

while (temp>0)
{
   remember = temp% 10;
   reverse = reverse *10 + remember;
   temp = temp/10;
}

temp = no;

if (no == reverse){
   printf("no %d is a Palimdrome", no);
} else {
   printf("no %d is not a Palimdrome", no);
}
```

Output:

```
PS C:\Users\manis\OneDrive\Desktop\New folder\output> & .\'demo.exe'
no 151 is a Palimdrome
```

// Q10. Add the (first and last) digit of the given number

```
   int no = 156;
   int temp = no;
   int remember = 0;
   int reverse = 0;

   int fistdigit, lastdigit;

   while (temp>0)
   {

      remember = temp% 10;
      reverse = reverse *10 + remember;
      temp = temp/10;
   }

   fistdigit = reverse%10;
   lastdigit = no%10;

   int sum_of_fist_and_last = fistdigit + lastdigit;

   printf("Sum of first and last digit is: %d + %d = %d", fistdigit, lastdigit,
sum_of_fist_and_last);
```

Output:

```
PS C:\Users\manis\OneDrive\Desktop\New folder\output> & .\'demo.exe'
Sum of first and last digit is: 1 + 6 = 7
```