ES-202

Introduction to Programming in C

Assignment-II

C Programming Exercises

Note: All students must upload their code on GitHub and submit your GitHub link for the evaluation

1. Write a C program to print all alphabets from a to z.

Source Code:

```
#include <stdio.h>
int main()
{
   for(int i = 97;i<=122;i++)
   {
   printf(" %c \n", i);
   }
return 0;
}
```

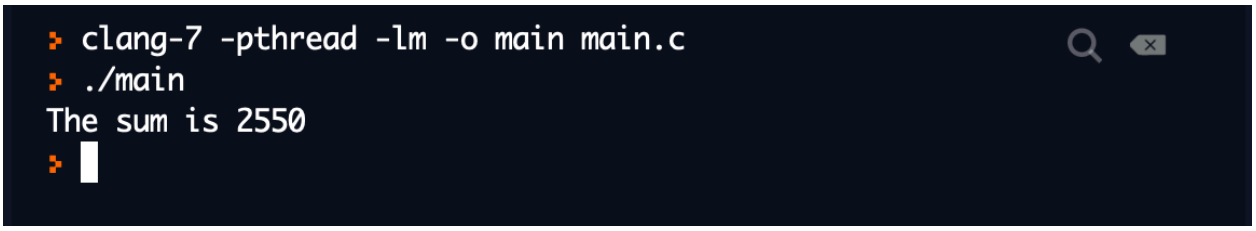
Output:

2. Write a C program to print all even numbers between 1 to 100.

Source Code:

```
#include <stdio.h>
int main()
{
   int sum=0;
   for(int i = 2;i<=100;i+=2)
   {
   sum+=i;
   }
   printf("The sum is %d \n",sum);
   return 0;
}
```

Output:

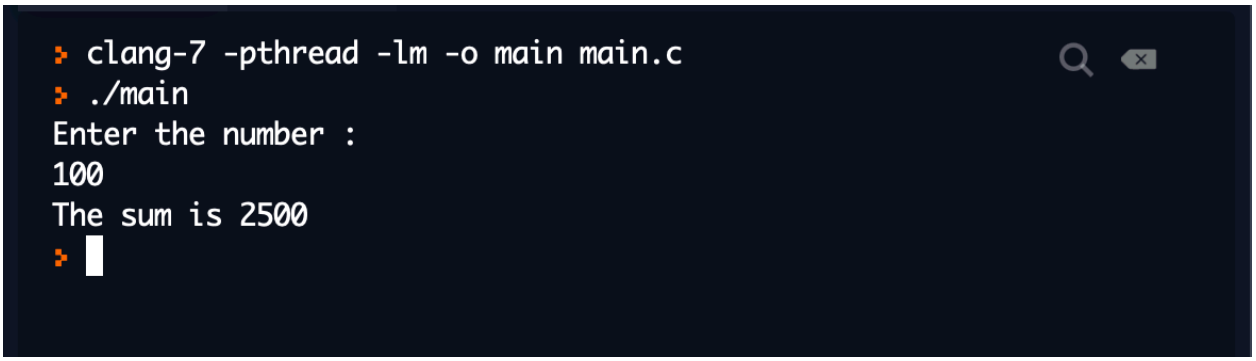


3. Write a C program to find sum of all odd numbers between 1 to n.

Source Code:

```
#include <stdio.h>
int main()
{
   int n,sum=0;
   printf("Enter the number : \n");
   scanf("%d",&n);
   for(int i = 1;i<=n;i+=2)
   {
   sum+=i;
   }
   printf("The sum is %d \n",sum);
   return 0;
}
```

Output:

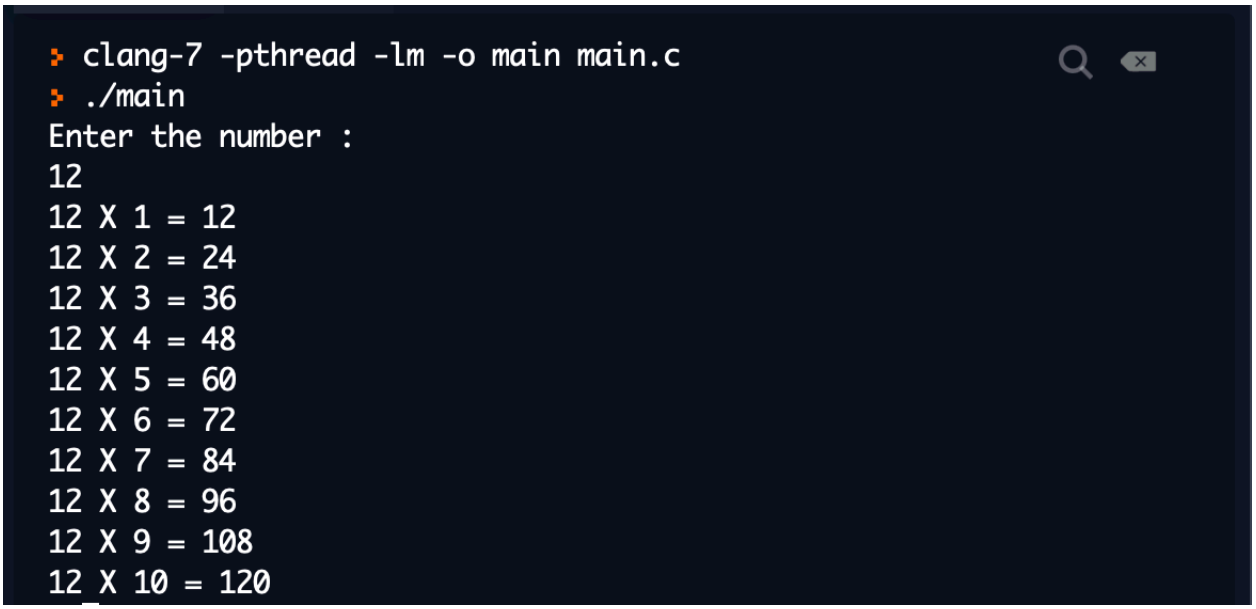


4. Write a C program to print multiplication table of any number.

Source Code:

```
#include <stdio.h>
int main()
{
   int n;
   printf("Enter the number : \n");
   scanf("%d",&n);
   for(int i = 1;i<=10;i++)
   {
   printf("%d X %d = %d  \n", n, i,n*i);
   }
   return 0;
}
```

Output:

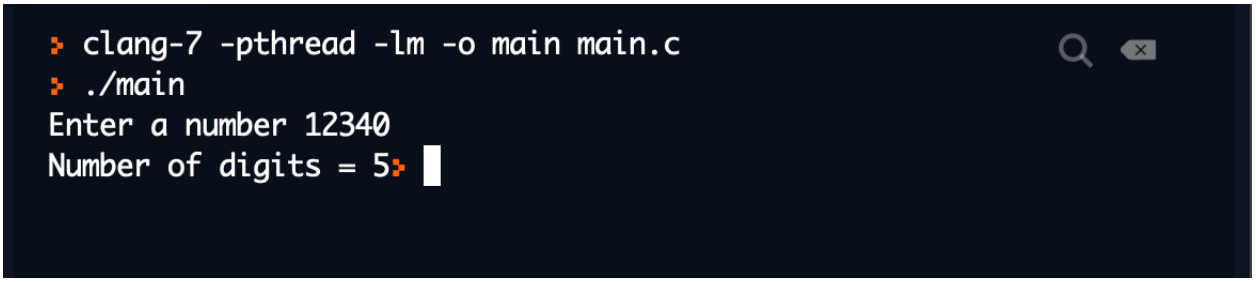


5. Write a C program to count number of digits in a number.

Source Code:

```
#include <stdio.h>
#include <math.h>
int main()
{
    int a;
    printf("Enter a number ");
    scanf("%d",&a);
    int numofdigits = log10(a)+ 1;
    printf("Number of digits = %d", numofdigits);
    return 0;
}
```

Output:



6. Write a C program to find first and last digit of a number.

Source Code:

```
#include <stdio.h>
int main()
{
   int n;
   int fd,ld;
   printf("Enter Number \n");
   scanf("%d",&n);
   int temp = n;
   ld = n%10;
   while(temp>0)
   {
      fd=temp%10;
      temp= temp/10;

   }
   printf("First Digit is %d and Last Digit is %d \n",fd,ld);
}
```

Output:

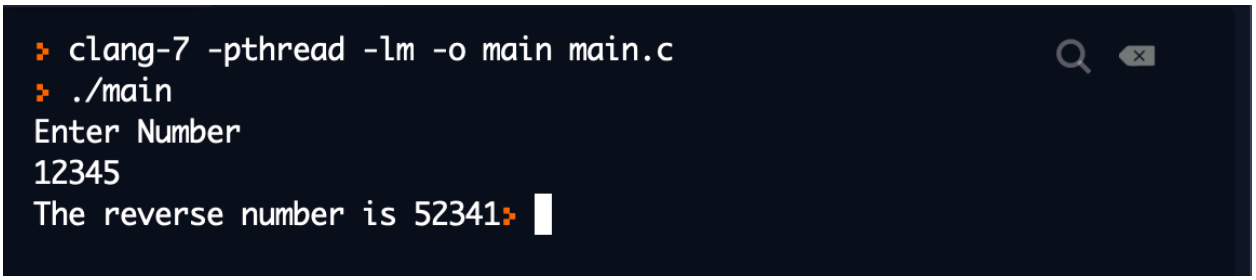
7. Write a C program to swap first and last digits of a number.

Source Code:

```
#include <stdio.h>
int main()
{
    int n;
    int fd,ld,rev;
    printf("Enter Number \n");
    scanf("%d",&n);
    int temp = n;
    ld = n%10;
    rev = 0;
    while(temp>0)
    {
        fd=temp%10;
        rev = rev*10+fd;
        temp= temp/10;

    }
    int newnum = ld;
    temp = rev/10;
    while(temp>9)
    {
        newnum = newnum*10+(temp%10);
        temp/=10;
    }
    newnum = fd+(newnum*10);
    printf("The reverse number is %d",newnum);
    return 0;
}
```

Output:



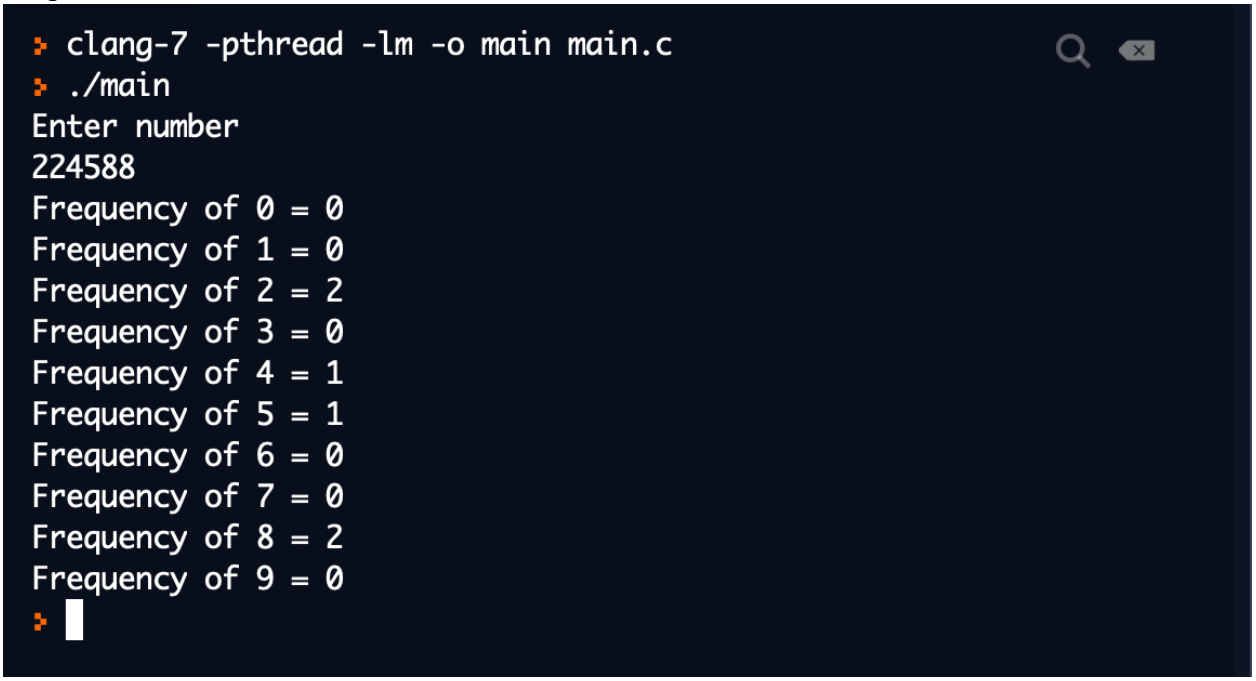
8. Write a C program to find frequency of each digit in each integer.

Source Code:

```
#include <stdio.h>

int main()
{
    int num, lastd, i;
    int freq [10];
    printf("enter number");
    scanf ("%d" , &num);
    for(i=0; i<10; i++)
    {
        freq[i] = 0;
    }
    while (num != 0)
    {
        lastd = num%10;
        freq [lastd]++ ;
        num = num/10;
    }
    for(i=0; i<10; i++)
    {
        printf("Frequency of %d = %d\n", i, freq[i]);
    }
    return 0;
}
```

Output:



9. Write a C program to enter a number and print it in words.

Source Code:

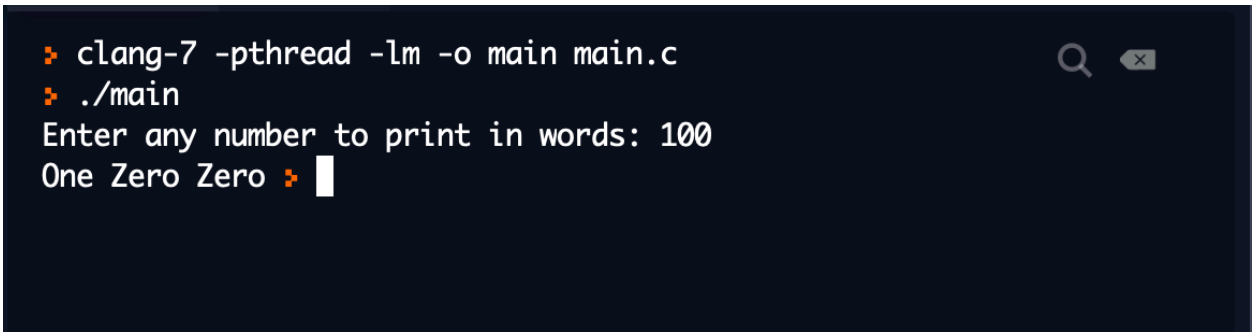
```
#include <stdio.h>
#include <math.h>

int main()
{
    int n, num = 0, digits;
    printf("Enter any number to print in words: ");
    scanf("%d", &n);
    digits = (int) log10(n);
    while(n != 0)
    {
        num = (num * 10) + (n % 10);
        n /= 10;
    }
    digits =  digits - ((int) log10(num));
    while(num != 0)
    {
        switch(num % 10)
        {
            case 0:
                printf("Zero ");
                break;
            case 1:
                printf("One ");
                break;
            case 2:
                printf("Two ");
                break;
            case 3:
                printf("Three ");
                break;
            case 4:
                printf("Four ");
                break;
            case 5:
                printf("Five ");
                break;
            case 6:
                printf("Six ");
                break;
            case 7:
                printf("Seven ");
                break;
            case 8:
                printf("Eight ");
                break;
            case 9:
                printf("Nine ");
                break;
        }

        num /= 10;
```

```
    }
    while(digits)
    {
        printf("Zero ");
        digits--;
    }
    return 0;
}
```

Output:



10. Write a C program to print all ASCII character with their values.

```
#include <stdio.h>
int main()
{
   for(int i = 33;i<=122;i++)
   {
   printf("ASCII value of %c = %d \n", i, i);
   }
   return 0;
}
```

```
ASCII value of A = 65
ASCII value of B = 66
ASCII value of C = 67
ASCII value of D = 68
ASCII value of E = 69
ASCII value of F = 70
ASCII value of G = 71
ASCII value of H = 72
ASCII value of I = 73
ASCII value of J = 74
ASCII value of K = 75
ASCII value of L = 76
ASCII value of M = 77
ASCII value of N = 78
ASCII value of O = 79
ASCII value of P = 80
ASCII value of Q = 81
ASCII value of R = 82
ASCII value of S = 83
ASCII value of T = 84
ASCII value of U = 85
ASCII value of V = 86
ASCII value of W = 87
ASCII value of X = 88
ASCII value of Y = 89
ASCII value of Z = 90
ASCII value of [ = 91
ASCII value of \ = 92
ASCII value of ] = 93
ASCII value of ^ = 94
ASCII value of _ = 95
ASCII value of ` = 96
ASCII value of a = 97
ASCII value of b = 98
```

```
ASCII value of Z = 90
ASCII value of [ = 91
ASCII value of \ = 92
ASCII value of ] = 93
ASCII value of ^ = 94
ASCII value of _ = 95
ASCII value of ` = 96
ASCII value of a = 97
ASCII value of b = 98
ASCII value of c = 99
ASCII value of d = 100
ASCII value of e = 101
ASCII value of f = 102
ASCII value of g = 103
ASCII value of h = 104
ASCII value of i = 105
ASCII value of j = 106
ASCII value of k = 107
ASCII value of l = 108
ASCII value of m = 109
ASCII value of n = 110
ASCII value of o = 111
ASCII value of p = 112
ASCII value of q = 113
ASCII value of r = 114
ASCII value of s = 115
ASCII value of t = 116
ASCII value of u = 117
ASCII value of v = 118
ASCII value of w = 119
ASCII value of x = 120
ASCII value of y = 121
ASCII value of z = 122
>
```