Lab 03

Code 1:

```c
#include <stdio.h>
int main()
{
int i,a[10],min,max;
printf("Enter 10 integers: ");

for(i=0;i<10;i++)
{
scanf("%d",&a[i]);
}
min=a[0];
max=a[0];
for(i=1;i<10;i++)
{
if(a[i]<min)
min=a[i];
if(a[i]>max)
max=a[i];
}
printf("The largest number is: %d\n",max);
printf("The smallest number is: %d\n",min);
}
```

Output:

```
miruthi@Miruthis-MacBook-Air Desktop % gcc q1.c -o q1
miruthi@Miruthis-MacBook-Air Desktop % ./q1
Enter 10 integers: 23 21 37 65 38 40 87 35 64 24
The largest number is: 87
The smallest number is: 21
```

Code 2:

```c
#include <stdio.h>
int fact(int n)
{
if(n<=1)
{
return 1;
}
else
{
return n*fact(n-1);
}}
int main()
{
int a;
printf("Enter a number: ");
scanf("%d",&a);
printf("The factorial is: %d",fact(a));
}
```

Output:

```
miruthi@Miruthis-MacBook-Air Desktop % gcc q2.c -o q2
miruthi@Miruthis-MacBook-Air Desktop % ./q2
Enter a number: 5
The factorial is: 120%
```

Code 3:

```c
#include <stdio.h>

int fib(int n)
{
if(n==0)
return 0;
else if(n==1)
return 1;
else
return fib(n - 1) + fib(n - 2);
}
int main()
{
int n, i;
printf("Enter the number: ");
scanf("%d", &n);
printf("Fibonacci series: \n");
for(i = 0;i<n;i++)
{
printf("%d ", fib(i));
}

}
```

Output:

```
miruthi@Miruthis-MacBook-Air Desktop % gcc q3.c -o q3
miruthi@Miruthis-MacBook-Air Desktop % ./q3
Enter the number: 7
Fibonacci series:
0 1 1 2 3 5 8 %
```