Assignment-07

1.

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

int min(int a,int b){
    if(a<b)
    return a;
    else
    return b;
}
int main()
{
    int a,b,i;
    printf("enter two numbers");
    scanf("%d%d",&a,&b);
    for(i=min(a,b);i>0;i--){
        if(a%i==0 && b%i==0)
        break;
    }
    if(i==1)
    printf("%d and %d are co prime",a,b);
    else
    printf("%d and %d are not co prime",a,b);

    return 0;
}
```

2.

```c
#include<stdio.h>

int main()
{
    int n,first=0,second=1,third=0;
    printf("enter the position");
    scanf("%d",&n);

    printf("%d\t",first);
    for(int i=1;i<n;i++){
      third=first+second;
      first=second;
      second=third;
```

```
    printf("%d\t",third);
    }
    return 0;
}
```

3.

```
#include<stdio.h>

int main()
{
    int n,first=0,second=1,third=0;
    printf("enter the number");
    scanf("%d",&n);
       if(n==first)
       printf("yes");
        while(third<=n){
      third=first+second;
      first=second;
      second=third;
      if(third==n)
      printf("yes");
      else
       printf("no");
        }
    return 0;
}
```

4.

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

int max(int a,int b){
    if(a>b)
    return a;
    else
    return b;
}
int min(int a,int b){
    if(a<b)
    return a;
    else
    return b;
```

```
}
int main()
{
    int a,b,i;
    printf("enter two numbers");
    scanf("%d%d",&a,&b);
    for(i=min(a,b);i>0;i--){
        if(a%i==0 && b%i==0)
        break;
    }
    printf("hcf of %d and %d is :%d",a,b,i);
    return 0;
}
```

5.

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

int min(int a,int b){
    if(a<b)
    return a;
    else
    return b;
}
int main()
{
    int a,b,i;
    printf("enter two numbers");
    scanf("%d%d",&a,&b);
    for(i=min(a,b);i>0;i--){
        if(a%i==0 && b%i==0)
        break;
    }
    if(i==1)
    printf("%d and %d are co prime",a,b);
    else
    printf("%d and %d are not co prime",a,b);

    return 0;
}
```

6.

```c
#include<stdio.h>
int prime(int a){
    if(a==2)
    return 1;

    for(int i=2;i<a;i++){
        if(a%i==0)
        return 0;
    }
    return 1;
}
int main()
{
 for (int i = 2; i<=100; i++)
 {
    if(prime(i))
    printf("%d\t",i);
 }
 return 0;
}
```

7.

```c
#include<stdio.h>
int max(int a,int b){
    if(a>b)
    return a;
    else
    return b;
}
int min(int a,int b){
    if(a<b)
    return a;
    else
    return b;
}
int prime(int a){
    if(a==2)
    return 1;

    for(int i=2;i<a;i++){
        if(a%i==0)
        return 0;
    }
    return 1;
}
```

```
int main()
{
    int a,b;
    printf("enter two numbers");
    scanf("%d %d",&a,&b);
 for (int i = min(a,b); i<max(a,b); i++)
 {
    if(prime(i))
    printf("%d\t",i);
 }
 return 0;
}
```

8.

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

int prime(int a);
int prime(int a){
    if(a==2)
    return 1;

    for(int i=2;i<a;i++){
        if(a%i==0)
        return 0;
    }
    return 1;
}
int main()
{
    int n;
    printf("enter number");
    scanf("%d",&n);
    for (int i = n+1; ; i++)
    {
      if(prime(i)==0){
        continue;
      }
      printf("%d",i);
      exit(90);
    }

    return 0;
}
```

9.

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

int digit(int n){
    int cnt=0;
    while(n>0){
        n=n/10;
        cnt++;
    }
    return cnt;
}
int main()
{
    int n,n1,sum=0;
    scanf("%d",&n);
    n1=n;
    int dig=digit(n);
    while(n>0){
        int rem=n%10;
        int res=1;
        int i=0;
         while(i<dig){
            res*=rem;
            i++;
         }
         sum +=res;
        //  sum +=pow(rem,dig);
         n/=10;
    }
    if(sum==n1)
    printf("yes");
    else
    printf("no");

    return 0;
}
```

10.

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

```c
int digit(int n){
    int cnt=0;
    while(n>0){
        n=n/10;
        cnt++;
    }
    return cnt;
}

int armstrong(int n){
     int n1,sum=0;
    // scanf("%d",&n);
    n1=n;
    int dig=digit(n);
    while(n>0){
        int rem=n%10;
        int res=1;
        int i=0;
         while(i<dig){
            res*=rem;
            i++;
         }
         sum +=res;
        //  sum +=pow(rem,dig);
         n/=10;
    }
    if(sum==n1)
    printf("%d\n",n1);
    // else
    // printf("no");
}
int main()
{
    int n=0;
    for(int i=0;i<1000;i++){
        armstrong(i);
    }

    return 0;
}
```