Day -5:

17) Finding Prime Factors of a number

```
#include <stdio.h>
void primeFactors(int n) {
  while (n%2==0) {
  printf("%d", 2);
   n=n/2;
}
for(int i=3; i*i<=n; i=i+2) {
  while (n%i==0) {
   printf("%d", i);
     n=n/i;
   }
}
  if (n>2)
   printf("%d", n);
}
  int main() {
   int num;
printf("Enter a number to find its prime factors:");
scanf("%d", &num);
printf("Prime factors of %d are:", num);
primeFactors(num);
 printf("\n");
  return 0;
}
```

18) Strong number

```
#include<stdio.h>
long long factorial(int n) {
    long long fact = 1;
  for(int i=1; i<=n; i++) {
      fact *= i;
    }
     return fact;
}
  int main() {
  int num, originalNum, remainder;
  long long sumOfFactorials = 0;
printf("Enter a positive integer: ");
scanf("%d", &num);
originalNum = num;
while(num>0) {
    remainder = num%10;
   sumoffactorials += factorial(remainder);
    num /= 10;
 }
if(sumoffactorials == originalNum) {
   printf("%d is a strong number.\n", originalNum);
} else {
  printf("%d is not a strong number.\n", originalNum);
}
 return 0;
}
```

1a) perfect Number

```
#include <stdio.h>
int main() {
int number, i, sum = 0;
printf("Enter any number to check if it is a perfect
                                    number: ");
scanf("%d", &number);
for (i=1; i<number; i++) {
if (number % i == 0) {
sum = sum + i;
}
}
if (sum == number ) {
  printf ("%d is a perfect Number.\n", number);
} else {
printf ("%d is not a perfect number.\n", number);
}
 return 0;
}
```

2a) perfect square

```
#include <stdio.h>
#include <math.h>
int isperfectsquare(int num) {
 if (num<0) {
  return 0;
}
if (num==0) {
  return 1;
```

```
}
 long long root = round (sqrt(num));
  return (root * root == num);
}
  int main() {
    int number;
printf (" Enter an integer: ");
scanf ("%d", &number);
if (isperfectSquare(number)) {
   printf ("%d is a perfect square.\n", number);
} else {
 printf ("%d is not a perfect square.\n", number);
}
 return 0;
}
```