TUT 3

Q1

```
#include<stdio.h>
 int main()
 {
    int lower_case,upper_case;
    char c;
    printf("Enter character : ");
    scanf("%c",&c);

    lower_case = (c=='a'||c=='e'||c=='i'||c=='o'||c=='u');
    upper_case = (c=='A'||c=='E'||c=='I'||c=='O'||c=='U');

    if(lower_case || upper_case)
       printf("It is a vowel");
    else
       printf("it is a consonant");
    return 0;
 }
```

```
Enter character : a
It is a vowel
Process returned 0 (0x0)   execution time : 1.358 s
```

```
Enter character : B
it is a consonant
Process returned 0 (0x0)   execution time : 0.940 s
```

Q2

```
#include<stdio.h>
int main(){
```

```
int n,x;
int sum=0;
printf("Enter the number : ");
scanf("%d",&n);
while (n>0)
{
   x=n%10;
   sum=sum+x;
   n=n/10;
}
   printf("The addition of the digits is %d",sum);

   return 0;
}
```

```
Enter the number : 123
The addition of the digits is 6
Process returned 0 (0x0)   execution time : 5.942 s
```

```
Enter the number : 2231
The addition of the digits is 8
Process returned 0 (0x0)   execution time : 2.264 s
```

Q3

```
#include<stdio.h>
int main(){
 int n,y,w,d;
 printf("Enter no of Days :");
 scanf("%d",&n);
 y=n/365;
 n=n%365;
 w=n/7;
 d=n%7;
```

```
 printf("Years : %d\n",y);
 printf("Weeks : %d\n",w);
 printf("Days : %d\n",d);
 return 0;
}
```

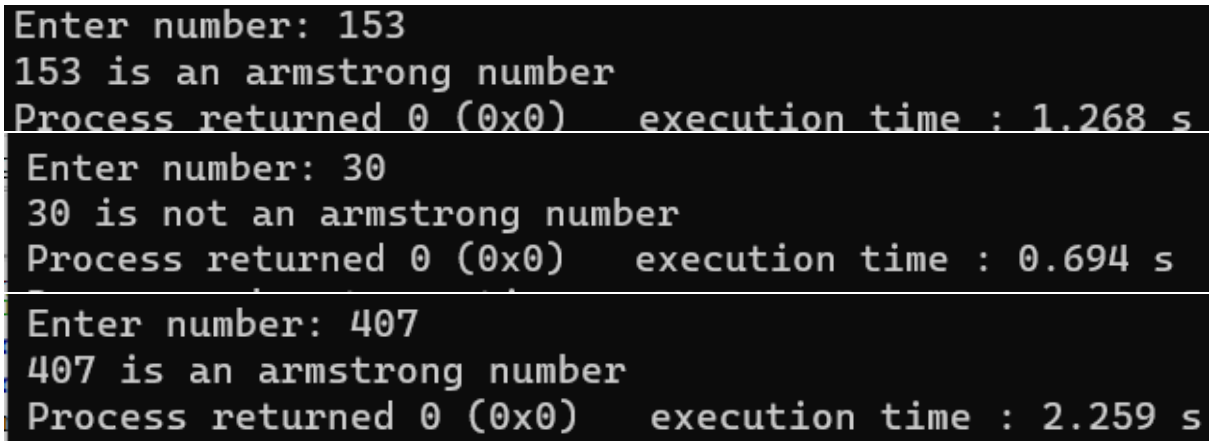
```
Enter no of Days :1329
Years : 3
Weeks : 33
Days : 3

Process returned 0 (0x0)   execution time : 3.284 s
```

```
Enter no of Days :1200
Years : 3
Weeks : 15
Days : 0

Process returned 0 (0x0)   execution time : 3.477 s
```

Q4

```
#include<stdio.h>
int main(){
int num,ori,rem,rev=0;
printf("Enter number: ");
scanf("%d",&num);
ori=num;

while(num>0)
{
   rem=num%10;
   rev=rev+(rem*rem*rem);
   num=num/10;
}
```

```
if(ori==rev)
{
   printf("%d is an armstrong number",ori);
}
else
{
   printf("%d is not an armstrong number",ori);
}
return 0;
}
```



Q5

```
#include <stdio.h>
int main() {
  int y;
  printf("Enter a year : ");
  scanf("%d",&y);

  if (y % 400 == 0) {
    printf("%d is a leap year", y);
  }

  else if (y % 100 == 0) {
```

```
    printf("%d is not a leap year", y);
  }

  else if (y % 4 == 0) {
    printf("%d is a leap year", y);
  }

  else {
    printf("%d is not a leap year", y);
  }

  return 0;
}
```

```
Enter a year : 1900
1900 is not a leap year
Process returned 0 (0x0)   execution time : 2.046 s
```

```
Enter a year : 2024
2024 is a leap year
Process returned 0 (0x0)   execution time : 1.698 s
```

Q6

```
#include <stdio.h>
int main()
{
 int x,y;
   printf("Input the coordinate(x,y): \n");
   scanf("%d",&x);
   scanf("%d",&y);
   if (x>0 && y>0)
   printf("The coordinate point (%d,%d) lies in First Quadrant ",x,y);
   else if (x<0 && y>0){
```

```
    printf("The coordinate point (%d,%d) lies in secound Quadrant ",x,y);
    }else if (x<0 && y<0){
     printf("The coordinate point (%d,%d) lies in Third Quadrant ",x,y);
     }else if (x>0 && y<0){
      printf("The coordinate point (%d,%d) lies in Forth Quadrant ",x,y);
      }else if (x == 0 && y != 0) {
       printf("The point (%d,%d) lies on the Y-axis.",x,y);
      }else if (x == 0 && y != 0) {
       printf("The point (%d,%d) lies on the Y-axis.",x,y);
    } else if (x != 0 && y == 0) {
       printf("The point (%d,%d) lies on the X-axis",x,y);
    } else {
       printf("The point (%d,%d) is at the origin",x,y);
    }
    return 0;
}
```

```
Input the coordinate(x,y):
7
8
The coordinate point (7,8) lies in First Quadrant
Process returned 0 (0x0)   execution time : 1.402 s
```

```
Input the coordinate(x,y):
0
0
The point (0,0) is at the origin
Process returned 0 (0x0)   execution time : 1.312 s
```

```
Input the coordinate(x,y):
9
-6
The coordinate point (9,-6) lies in Forth Quadrant
Process returned 0 (0x0)   execution time : 3.644 s
```

Q7

```
#include<stdio.h>
int main() {
   int side1, side2, side3;

   printf("Enter the lengths of the three sides of the triangle: ");
   scanf("%d %d %d", &side1, &side2, &side3);

   if (side1 == side2 && side2 == side3) {
      printf("It is an equilateral triangle.\n");
   } else if (side1 == side2 || side1 == side3 || side2 == side3) {
      printf("It is an isosceles triangle.\n");
   } else {
      printf("It is a scalene triangle.\n");
   }
   return 0;
}
```

```
Enter the lengths of the three sides of the triangle: 5
6
7
It is a scalene triangle.

Process returned 0 (0x0)   execution time : 5.202 s
```

```
Enter the lengths of the three sides of the triangle:
5
5
5
It is an equilateral triangle.

Process returned 0 (0x0)   execution time : 2.052 s
```

```
Enter the lengths of the three sides of the triangle: 5
5
6
It is an isosceles triangle.

Process returned 0 (0x0)   execution time : 2.002 s
```