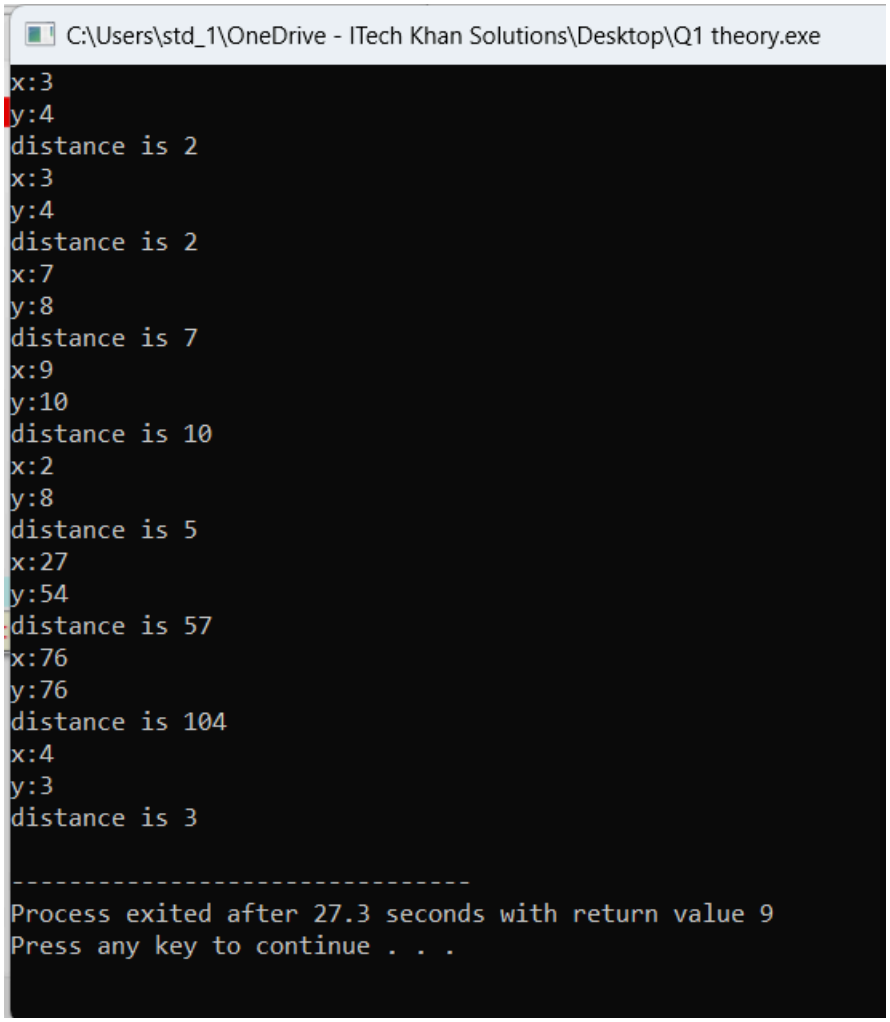
22K-4413

Q1

```
#include<stdio.h>
#include<math.h>
main()
{
	int lsd=2, n, i, x, y, dist;
	if(lsd==0)
	{
		n=(((pow(2,lsd))*4)+3);
	}
	if(lsd>0 && lsd<4)
	{
		n=((pow(2,lsd))*2);
	}
	for (i=1; i<=n; i++)
	{
		printf("x\n");
    scanf("%d", &x);
    printf("y\n");
    scanf("%d", &y);
    dist=(sqrt(((x-1)*(x-1))+((y-3)*(y-3))));
    printf("distance is %d\n", dist);
	}
}
```

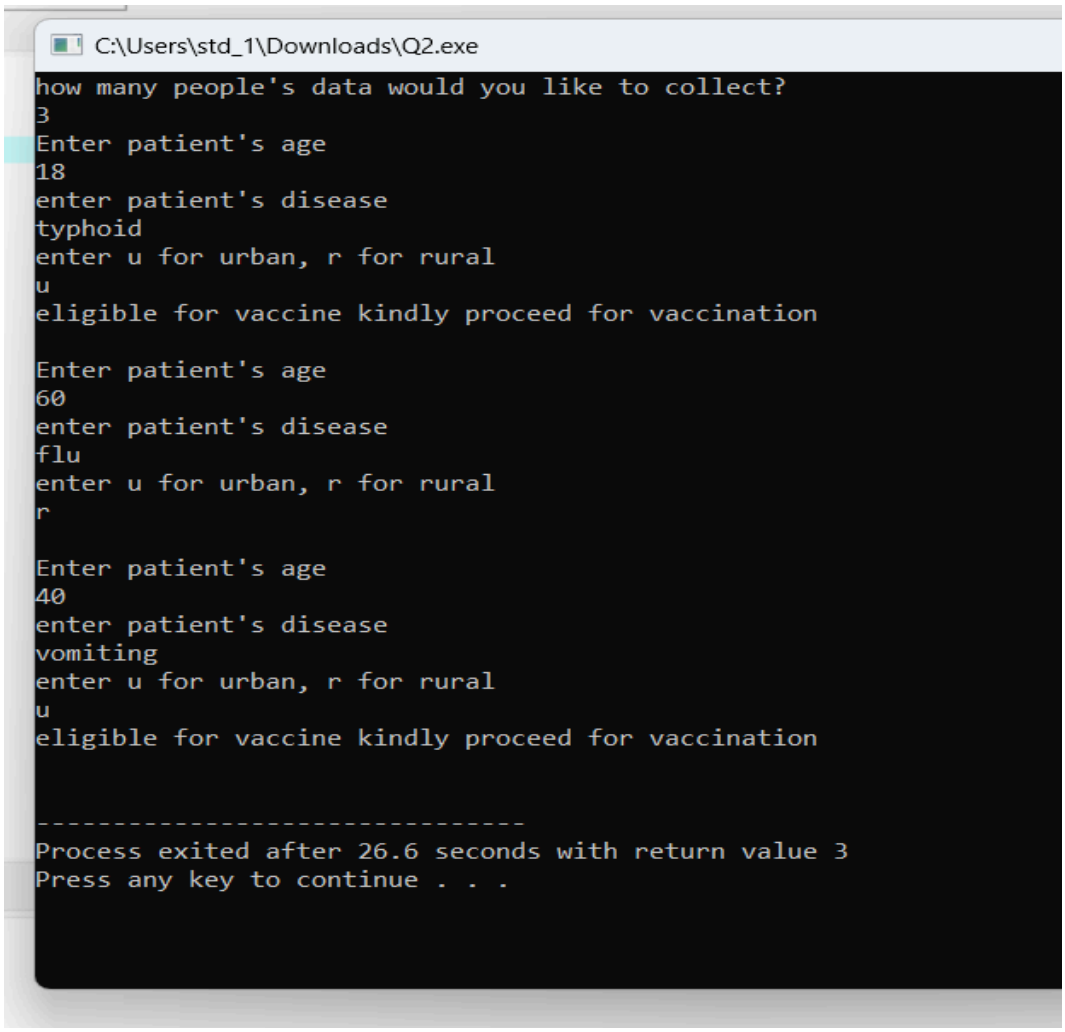

C:\Users\std_1\OneDrive - ITech Khan Solutions\Desktop\Q1 theory.exe
x:3
y:4
distance is 2
x:3
y:4
distance is 2
x:7
y:8
distance is 7
x:9
y:10
distance is 10
x:2
y:8
distance is 5
x:27
y:54
distance is 57
x:76
y:76
distance is 104
x:4
y:3
distance is 3

Process exited after 27.3 seconds with return value 9
Press any key to continue . . .

Q2

```
#include<stdio.h>
main()
{
   int i=1, p, age;
   char a, dis;
   printf("how many people's data would you like to collect?\n");
   scanf("%d", &p);
   do
   {
   printf("Enter patient's age\n");
   scanf("%d", &age);
   fflush(stdin);
   printf("enter patient's disease\n");
   scanf("%c", &dis);
   printf("enter u for urban, r for rural\n");
   fflush(stdin);
   scanf("%c", &a);
   if(age>=18 && a=='u')
   {
      printf("eligible for vaccine kindly proceed for vaccination \n");
   }
   else if (age<=18 && a=='r')
   {
      printf("not eligible for vaccince, kindly wait for vaccination \n");
   }
   i++;
```

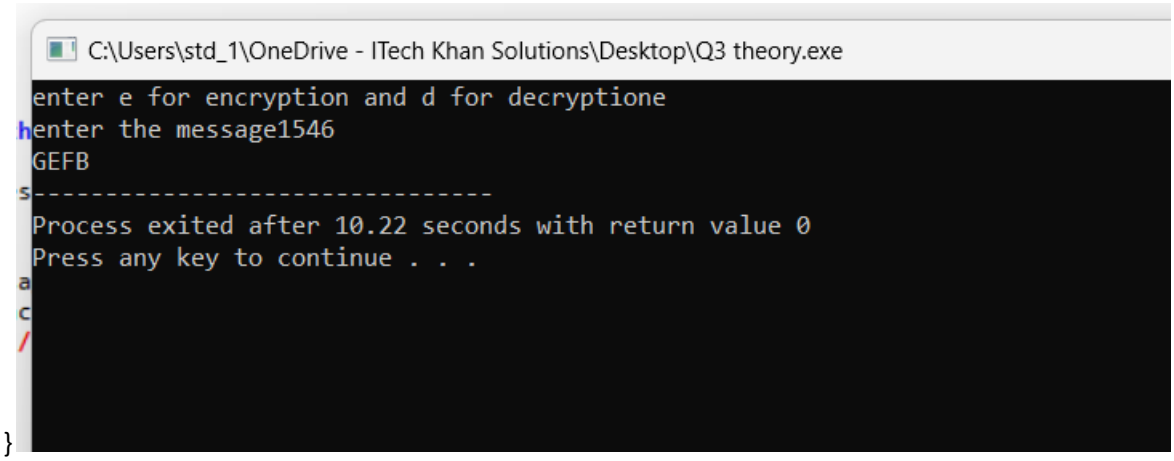
```
    printf("\n");
    }
    while(i<=p);
}
```



Q3

```
#include<stdio.h>
main()
{
	char type, encrypted;
	int dmessage, x=0, i, j;
	printf("enter e for encryption and d for decryption");
	scanf("%c", &type);
	switch(type)
	{
		case'e':
			{
				int message;
				printf("enter the message");
				fflush(stdin);
				scanf("%d", &message);
				for(i= 1; i<=4; i++)
				{
				encrypted=(message%10)+65;
				printf("%c", encrypted);
				message=message/10;
			  }
			break;
			}
		case'd':
			{
				for(j=1; j<=4; j++)
```

```
                {
                        printf("enter the message to be decrypted\n");
                        fflush(stdin);
                        scanf("%c", &dmessage);
                        x=(dmessage-65);
                        printf("%d\n", x);
                }
            }
        }
```

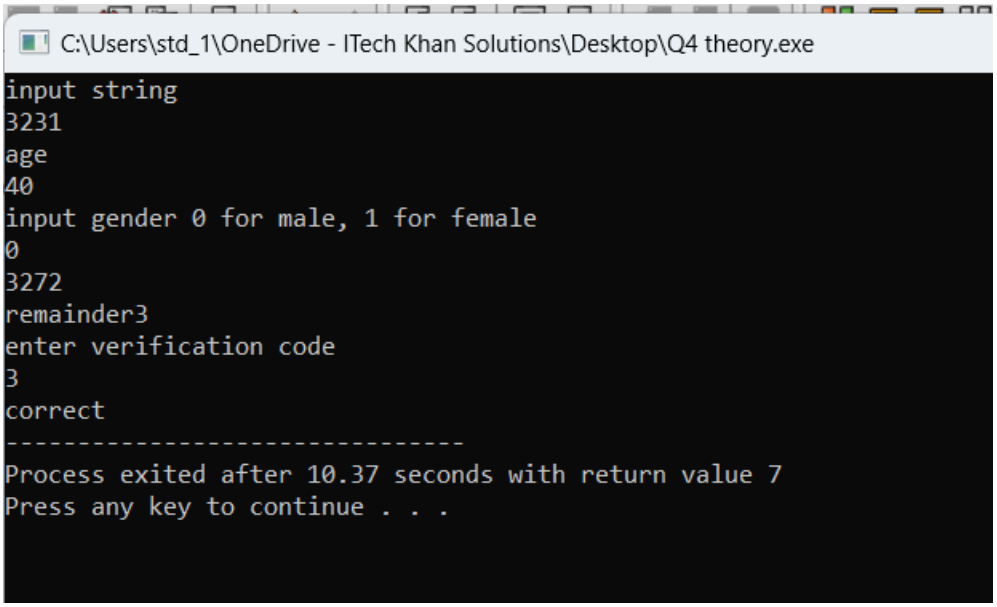



```
}
```

Q4

```
#include<stdio.h>
main()
{
        int string, age, i, sum=0, x, gender, v;
        printf("input string\n");
   scanf("%d", &string);
   printf("age\n");
   fflush(stdin);
   scanf("%d", &age);
   printf("input gender 0 for male, 1 for female\n");
   fflush(stdin);
   scanf("%d", &gender);
   if(gender==0)
        {
                string=string+age+1;
        }
   else
     {
          string=string+age;
```

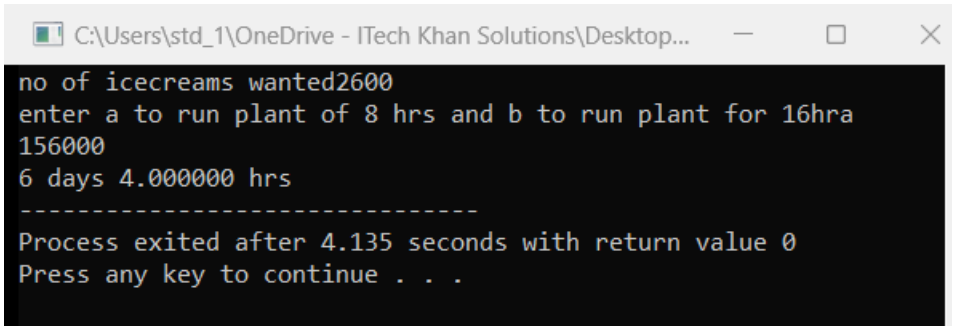
```
        }
        printf("%d\n", string);
  for(i=1; i<=4; i++)
        {
                x=string%10;
                sum=sum+x;
        }
        printf("remainder%d", sum%5);
        printf("enter verification code");
        scanf("%d", &v);
        if(v==(sum%5))
        printf("correct");
        else
        printf("in correct");
}
```



Q5

```
#include<stdio.h>
main()
{
   int days, price, x;
   char t;
   float ice, hr, tim;
   printf("no of icecreams wanted");
   scanf("%f", &ice);
   fflush(stdin);
   printf("enter a to run plant of 8 hrs and b to run plant for 16hr");
   scanf("%c", &t);
   switch(t)
   {
          case'a':
```

```
                {
                        days=ice/400;
                        tim=ice/400;
                        hr=(8*(tim-days));
                        price=ice*60;
                        break;
                }
        case'b':
                {
                        days=ice/800;
                        tim=ice/800;
                        hr=(16*(tim-days));
                        price=72000*days;
                        if(hr>=8)
                        {
                        price=(50*hr)*120+price;
                                }
                                else if (hr<8)
                                {
                                        price=(50*hr)*60;
                                }
                        }
        }
        printf("%d \n", price);
   printf("%d days %f hrs", days, hr);
}
```

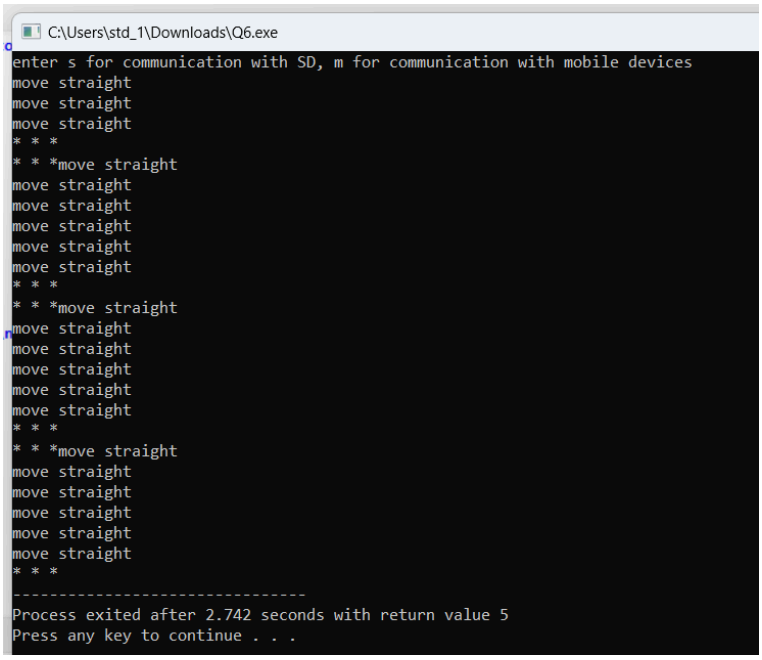


Q6

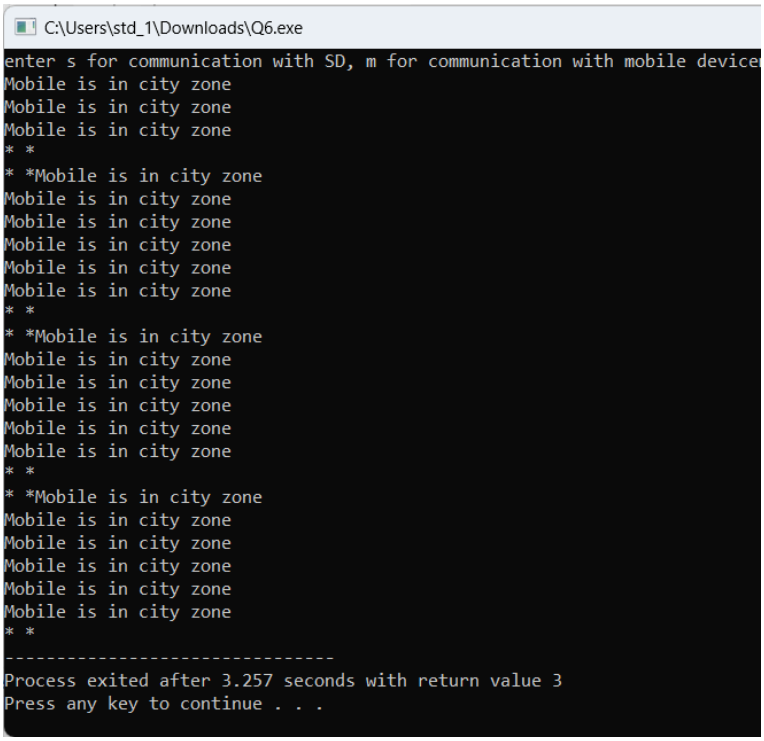
```
#include <stdio.h>
main()
{
   char comm;
   int i,j,k,l;
   printf("enter s for communication with SD, m for communication with mobile device");
   scanf("%c", &comm);
   switch(comm)
   {
      case 's':
      {
         for(i=1;i<=3;i++)
```

```
{printf("move straight\n");}
for(j=1;j<=3;j++)
{
   for(k=1;k<=1;k++)
   {
            printf("* * *\n");
      printf("* * *");
   }
   {printf("move straight\nmove straight\nmove straight\nmove straight\nmove straight\nmove straight\n");}
}
printf("* * *");
break;
}
case 'm':
{
  for(i=1;i<=3;i++)
   {printf("Mobile is in city zone\n");}
   for(j=1;j<=3;j++)
   {
      for(k=1;k<=1;k++)
      {
            printf("* *\n");
         printf("* *");
      }
      {printf("Mobile is in city zone\nMobile is in city zone\nMobile is in city zone\nMobile is in city zone\nMobile is in city zone\nMobile is in city zone\n");}
   }
   printf("* *");
```

```
    }
  }
}
```


C:\Users\std_1\Downloads\Q6.exe
enter s for communication with SD, m for communication with mobile devices
move straight
move straight
move straight
* * *
* * *move straight
move straight
move straight
move straight
move straight
move straight
* * *
* * *move straight
move straight
move straight
move straight
move straight
move straight
* * *
* * *move straight
move straight
move straight
move straight
move straight
move straight
* * *

Process exited after 2.742 seconds with return value 5
Press any key to continue . . .


C:\Users\std_1\Downloads\Q6.exe
enter s for communication with SD, m for communication with mobile device
Mobile is in city zone
Mobile is in city zone
Mobile is in city zone
* *
* *Mobile is in city zone
Mobile is in city zone
Mobile is in city zone
Mobile is in city zone
Mobile is in city zone
Mobile is in city zone
* *
* *Mobile is in city zone
Mobile is in city zone
Mobile is in city zone
Mobile is in city zone
Mobile is in city zone
Mobile is in city zone
* *
* *Mobile is in city zone
Mobile is in city zone
Mobile is in city zone
Mobile is in city zone
Mobile is in city zone
Mobile is in city zone
* *

Process exited after 3.257 seconds with return value 3
Press any key to continue . . .