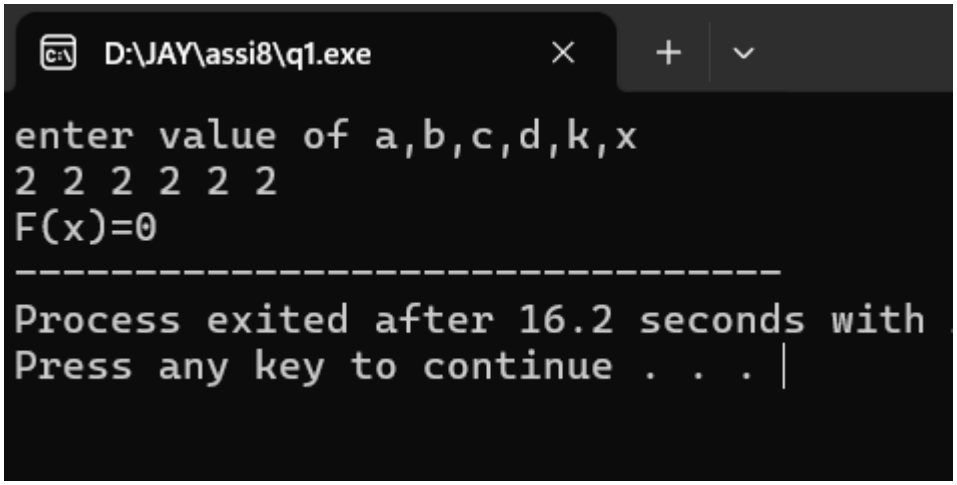
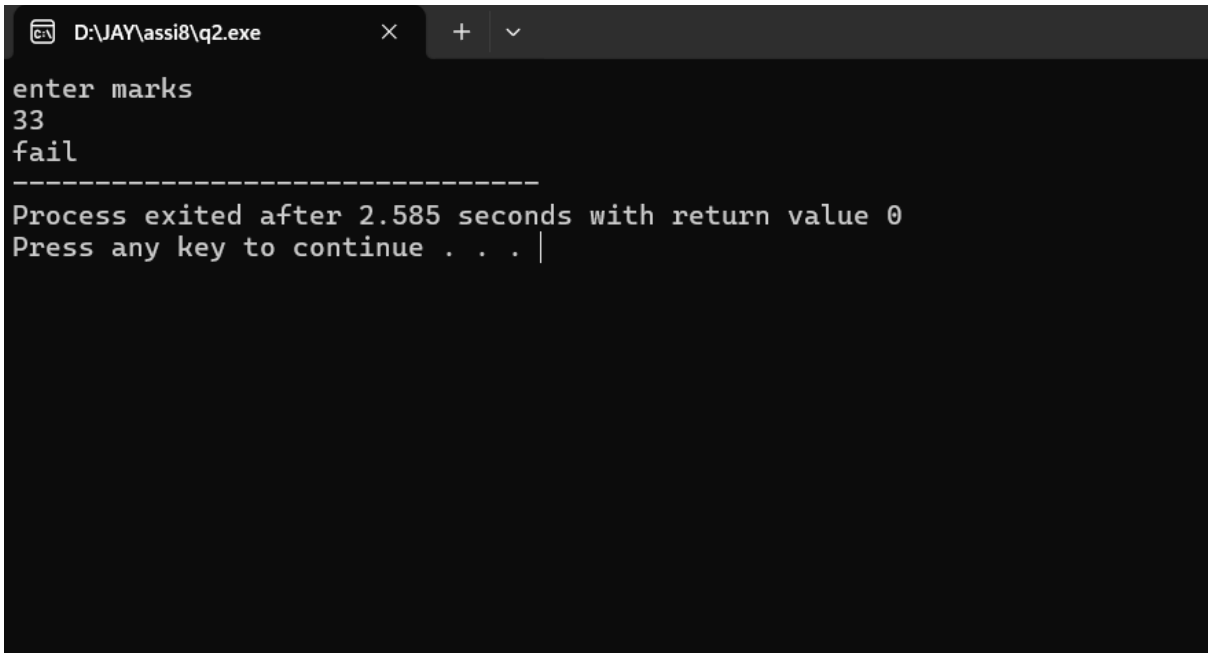
Q-1.




```
#include <stdio.h>
int main(){
	int a,b,c,d,k,x;
	printf("enter value of a,b,c,d,k,x \n");
	scanf("%d %d %d %d %d %d",&a,&b,&c,&d,&k,&x);
	if(x>k){
		int f=a*x*x*x-b*x*x+c*x-d;
		printf("F(x)=%d",f);
	}
	else if(x==k){
		printf("F(x)=0");
	}
	else{
		int f=-a*x*x*x+b*x*x-c*x+d;
		printf("F(x)=%d",f);
```

```
    }
    return 0;
}
```

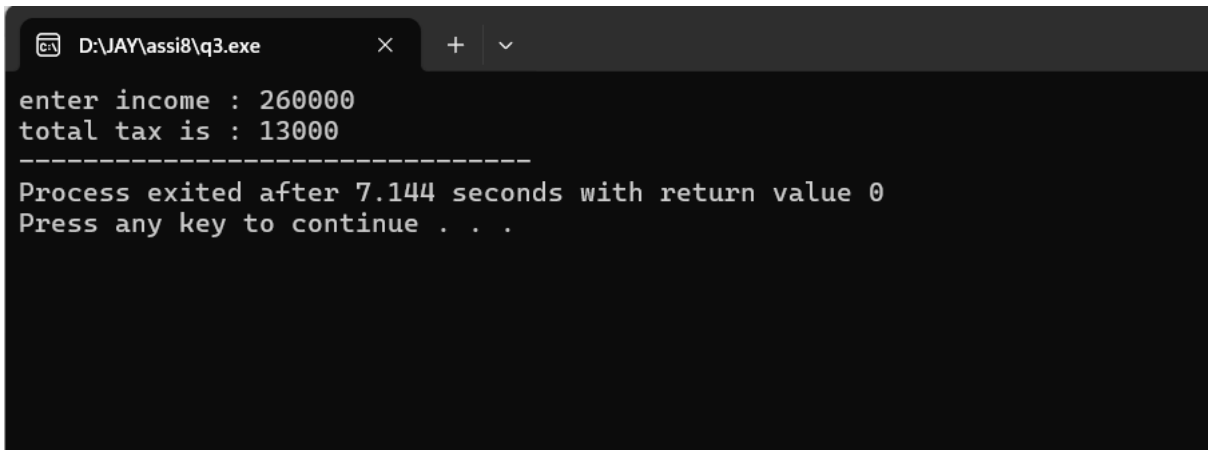
Q-2.




```
#include <stdio.h>
int main(){
    int n;
    printf("enter marks\n");
    scanf("%d",&n);
    if(n<0 || n>100){
        printf("invalid input ");
    }
    else if(n>=80){
        printf("Dinstinction");
    }
```

```
        else if(n>=60){
                printf("First class");
        }
        else if(n>=35){
                printf("second");
        }
        else{
                printf("fail");
        }
        return 0;
}
```

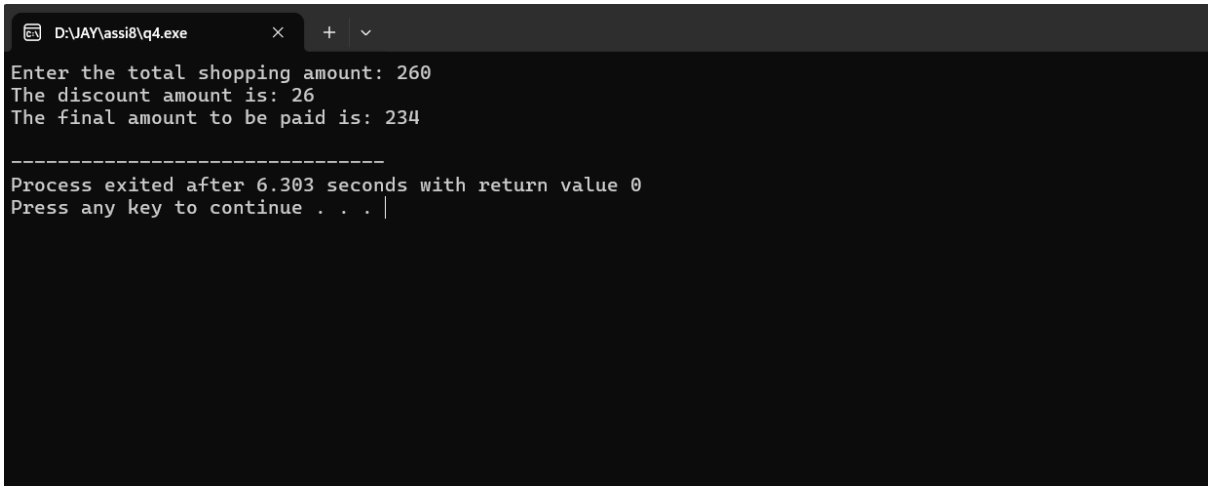
Q-3.




```
#include <stdio.h>
int main(){
        int inc;
        int tax;
        printf("enter income : ");
        scanf("%d",&inc);
```

```
    if(inc>=250000&&inc<=500000){
        tax = inc*5/100;
    }
    else if(inc>500000 && inc<=1000000){
        tax = 250000*5/100+(inc-500000)*20/100;
    }
    else if(inc>=1000000){
        tax = 250000*5/100 + 500000*20/100 + (inc-1000000)*30/100;
    }
    else{
        printf("no tax applicable");
        tax=0;
    }
    printf("total tax is : %d",tax);
    return 0;
}
```

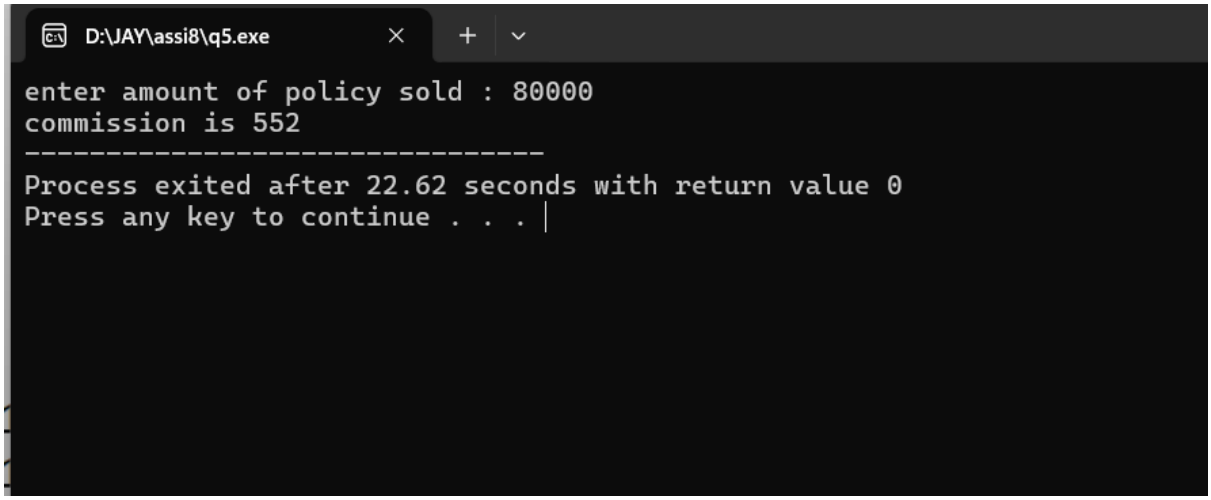
Q-4.




```
#include <stdio.h>

int main() {
    int totalAmount, discount = 0.0, finalAmount;

    printf("Enter the total shopping amount: ");
    scanf("%d", &totalAmount);

    if (totalAmount >= 100 && totalAmount <= 200) {
        discount = totalAmount * 0.05;
    } else if (totalAmount > 200 && totalAmount <= 400) {
        discount = totalAmount * 0.10;
    } else if (totalAmount > 400 && totalAmount <= 800) {
        discount = totalAmount * 0.20;
    } else if (totalAmount > 800) {
        discount = totalAmount * 0.25;
    }

    finalAmount = totalAmount - discount;
```

```
    printf("The discount amount is: %d\n", discount);
    printf("The final amount to be paid is: %d\n", finalAmount);

    return 0;
}
```

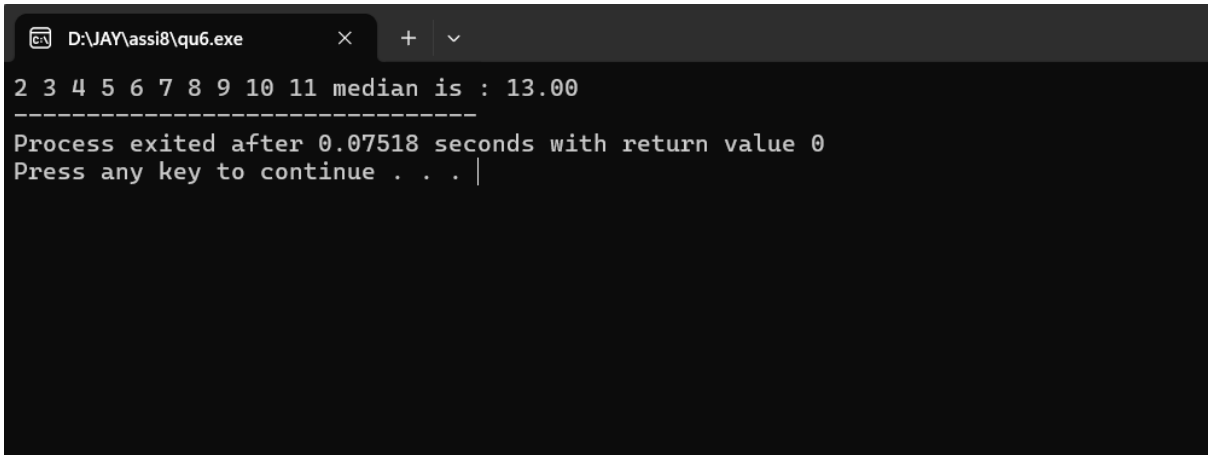
Q-5.




```
#include <stdio.h>
int main(){
        int amount;
        printf("enter amount of policy sold : ");
        scanf("%d",&amount);
        int commission;
        if (amount <= 10000)
        { commission = amount * 0.005;
        }
        else if (amount > 10000 && amount < 25000)
        {
                commission = 50 + (amount - 10000) * 0.006;
```

```
        }
        else {
         commission = 140 + (amount - 25000) * 0.0075;
        }
        printf("commission is %d",commission);
        return 0;
}
```

Q-6.

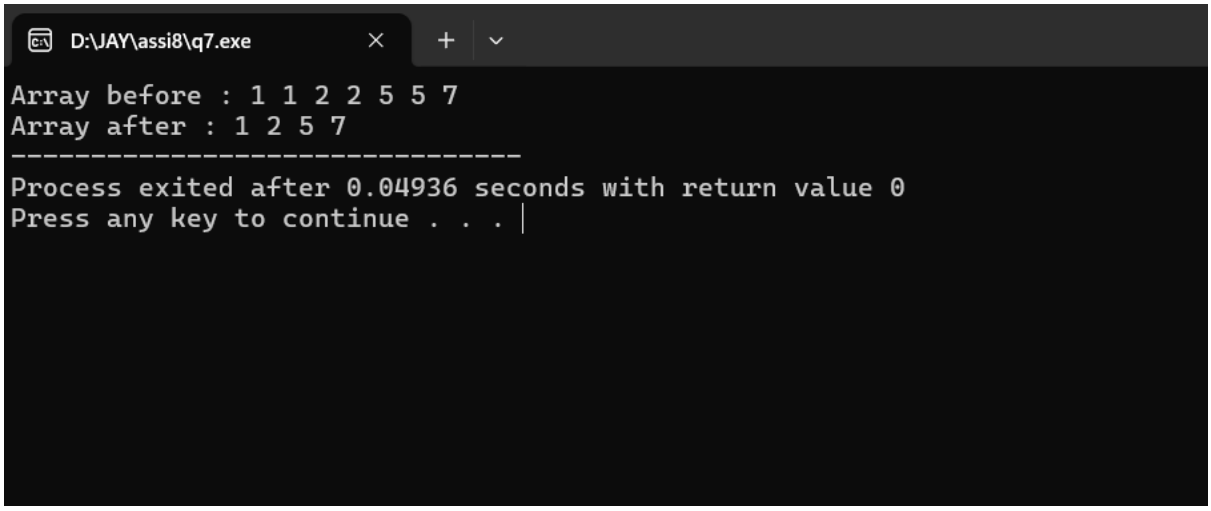



```
#include <stdio.h>
int main(){
        int arr1[5]={5,3,6,7,8};
        int arr2[5]={2,9,4,11,10};
        int arr3[10];
        float median;
        for(int i=0;i<10;i++){
                if(i<5){
                        arr3[i]=arr1[i];
                }
```

```
        else{
                arr3[i]=arr2[i-5];
        }
}
int n=10;

int count=0;
while(count<=n){
        for(int j=0;j<n-1;j++){
                if(arr3[j]>arr3[j+1]){
                        int temp=arr3[j];
                        arr3[j]=arr3[j+1];
                        arr3[j+1]=temp;
                }
        }
        count++;
}
for(int k=0;k<10;k++){
        printf("%d ",arr3[k]);
}
if(n%2==0){
        median = arr3[(n/2)-1]+arr3[(n/2)];
}
else{
        median = arr3[n/2];
}
```

```
    printf("median is : %.2f",median);
    return 0;

}
```

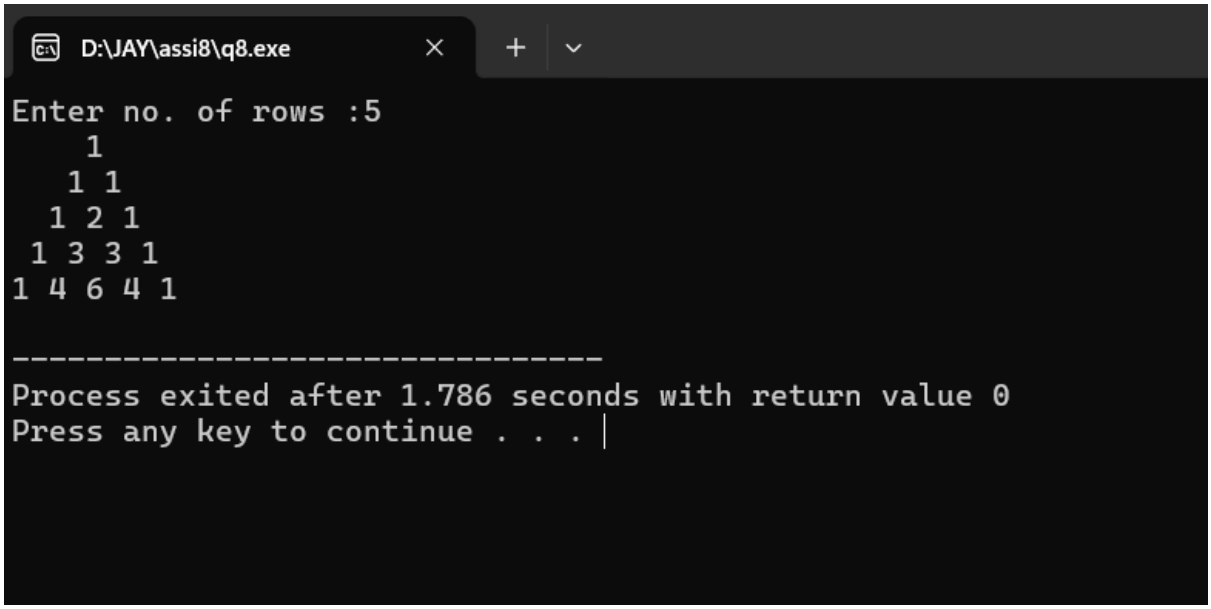
Q-7.




```
#include <stdio.h>
int main(){
    int arr[7]={1,1,2,2,5,5,7};
    printf("Array before : ");
    for(int i=0;i<7;i++){
        printf("%d ",arr[i]);
    }
    int j=0;
    for(int i=1;i<7;i++){
        if(arr[i]!=arr[j]){
            j++;
            arr[j]=arr[i];
```

```
            }
        }

        printf("\nArray after : ");

        for(int i=0;i<j+1;i++){
            printf("%d ",arr[i]);
        }


        return 0;
}
```

Q-8.



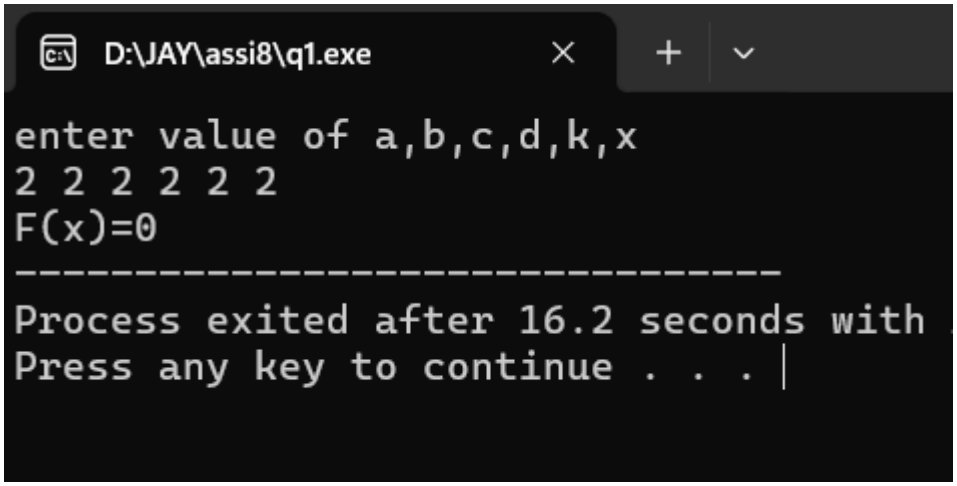

```
#include <stdio.h>

int com(int n,int m){
        if(n==0 || m==0){
```

```
        return 1;
    }
    if(m==n){
        return 1;
    }
    int p=1;
    for(int i=1;i<=n;i++){
        p*=i;

    }
    int q=1;
    for(int i=1;i<=m;i++){
        q*=i;
    }
    int t=1;
    for(int i=1;i<=(n-m);i++){
        t*=i;
    }

    return p/(t*q);

}
int main(){
    int r;
    com(3,1);
    printf("Enter no. of rows :");
```

```
    scanf("%d",&r);
    for(int i=0;i<r;i++){
        for(int j=0;j<r-i-1;j++){
            printf(" ");
        }
        for(int k=0;k<=i;k++){
            printf("%d ",com(i,k));
        }
        printf("\n");
    }
    return 0;
}
```

NAME : JAY U24CS026

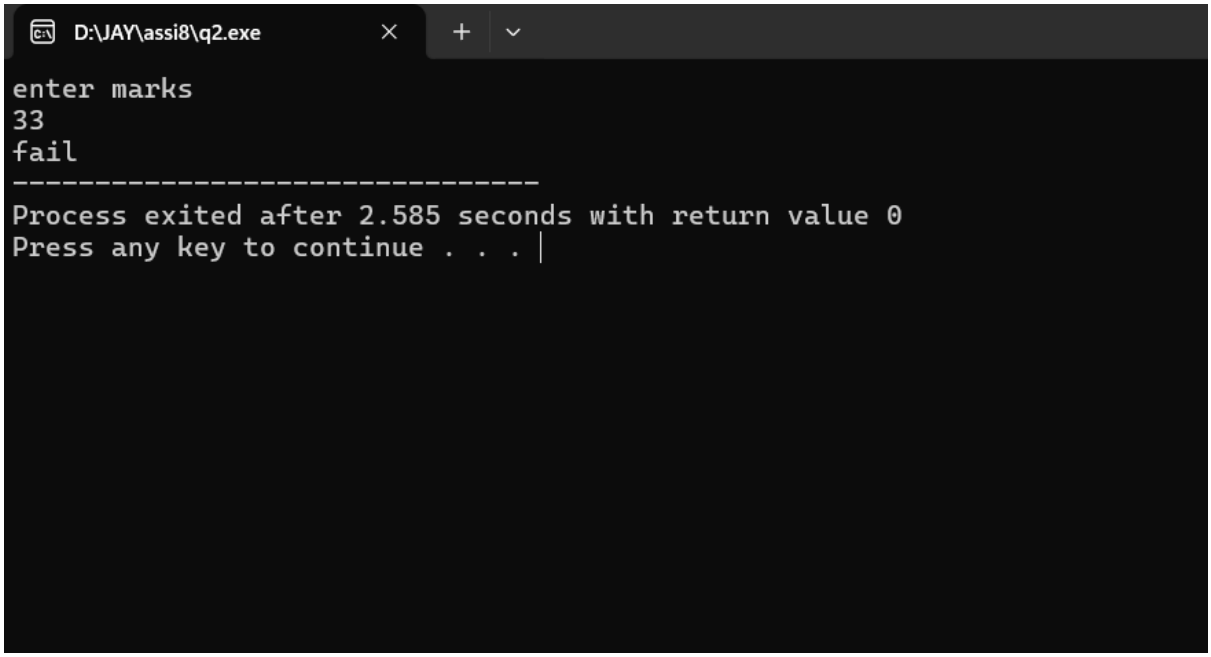
Q-1.




```
#include <stdio.h>
int main(){
	int a,b,c,d,k,x;
	printf("enter value of a,b,c,d,k,x \n");
	scanf("%d %d %d %d %d %d",&a,&b,&c,&d,&k,&x);
	if(x>k){
		int f=a*x*x*x-b*x*x+c*x-d;
		printf("F(x)=%d",f);
	}
	else if(x==k){
		printf("F(x)=0");
	}
	else{
```

```
        int f=-a*x*x*x+b*x*x-c*x+d;
        printf("F(x)=%d",f);
    }
    return 0;
}
```

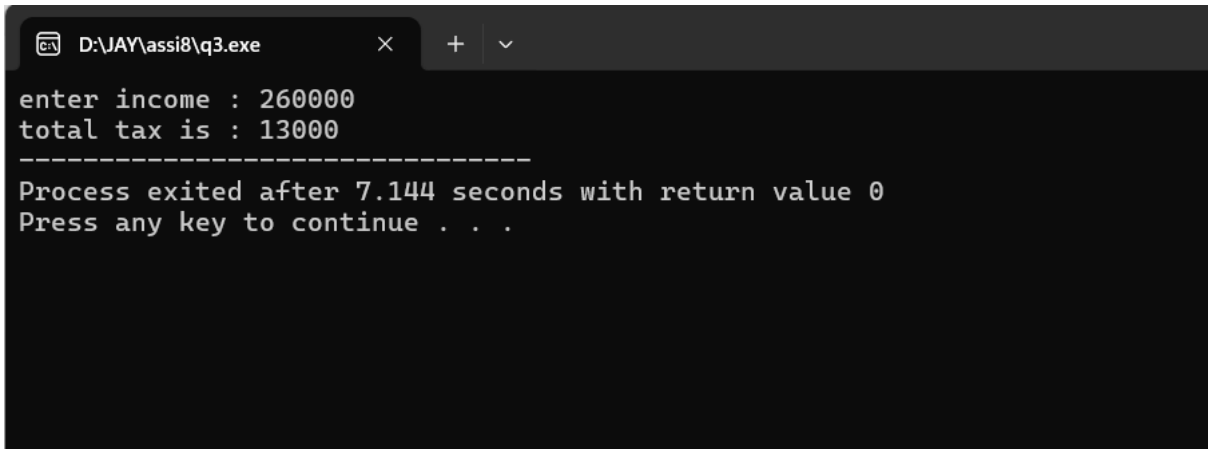
Q-2.




```
#include <stdio.h>
int main(){
    int n;
    printf("enter marks\n");
    scanf("%d",&n);
    if(n<0 || n>100){
        printf("invalid input ");
    }
    else if(n>=80){
```

```
            printf("Dinstinction");
        }
        else if(n>=60){
            printf("First class");
        }
        else if(n>=35){
            printf("second");
        }
        else{
            printf("fail");
        }
        return 0;
}
```

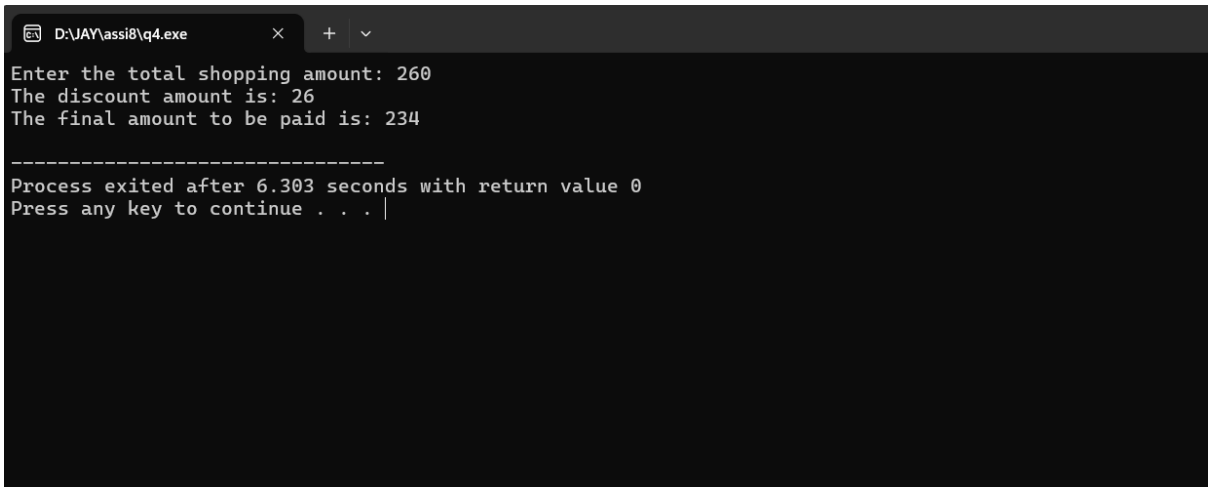
Q-3.




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

```
        printf("enter income : ");
        scanf("%d",&inc);
        if(inc>=250000&&inc<=500000){
                tax = inc*5/100;
        }
        else if(inc>500000 && inc<=1000000){
                tax = 250000*5/100+(inc-500000)*20/100;
        }
        else if(inc>=1000000){
                tax = 250000*5/100 + 500000*20/100 + (inc-1000000)*30/100;
        }
        else{
                printf("no tax applicable");
                tax=0;
        }
        printf("total tax is : %d",tax);
        return 0;
}
```

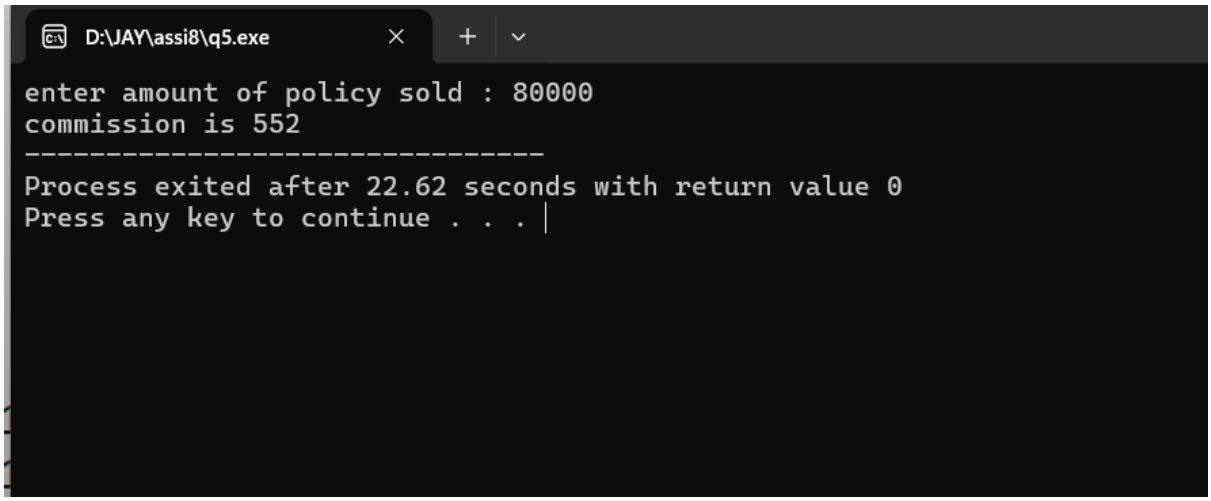
Q-4.




```
#include <stdio.h>

int main() {
    int totalAmount, discount = 0.0, finalAmount;

    printf("Enter the total shopping amount: ");
    scanf("%d", &totalAmount);

    if (totalAmount >= 100 && totalAmount <= 200) {
        discount = totalAmount * 0.05;
    } else if (totalAmount > 200 && totalAmount <= 400) {
        discount = totalAmount * 0.10;
    } else if (totalAmount > 400 && totalAmount <= 800) {
        discount = totalAmount * 0.20;
    } else if (totalAmount > 800) {
        discount = totalAmount * 0.25;
    }
```

```
    finalAmount = totalAmount - discount;
    printf("The discount amount is: %d\n", discount);
    printf("The final amount to be paid is: %d\n", finalAmount);

    return 0;
}
```

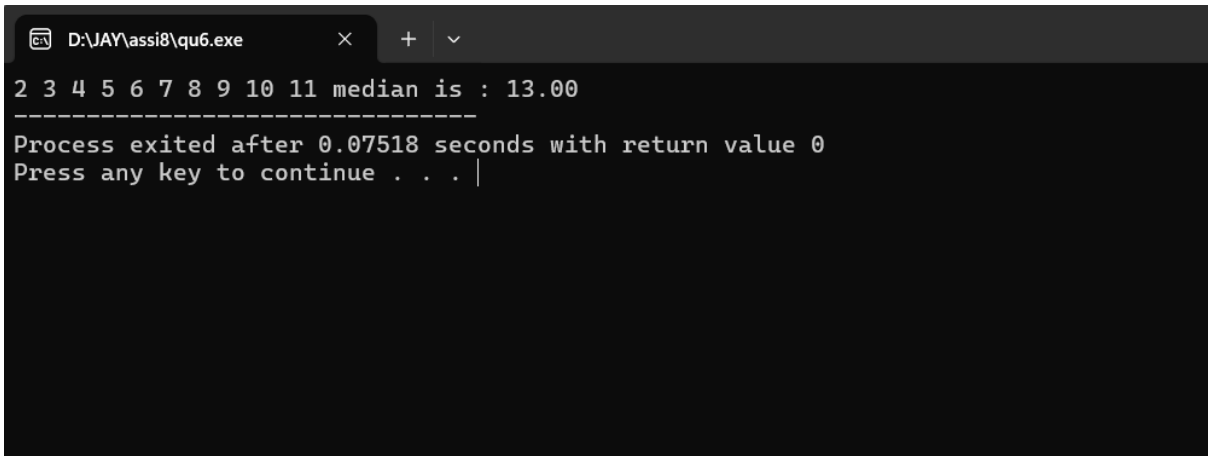
Q-5.




```
#include <stdio.h>
int main(){
        int amount;
        printf("enter amount of policy sold : ");
        scanf("%d",&amount);
        int commission;
        if (amount <= 10000)
        { commission = amount * 0.005;
        }
        else if (amount > 10000 && amount < 25000)
        {
```

```
            commission = 50 + (amount - 10000) * 0.006;
        }
        else {
         commission = 140 + (amount - 25000) * 0.0075;
        }
        printf("commission is %d",commission);
        return 0;
}
```

Q-6.

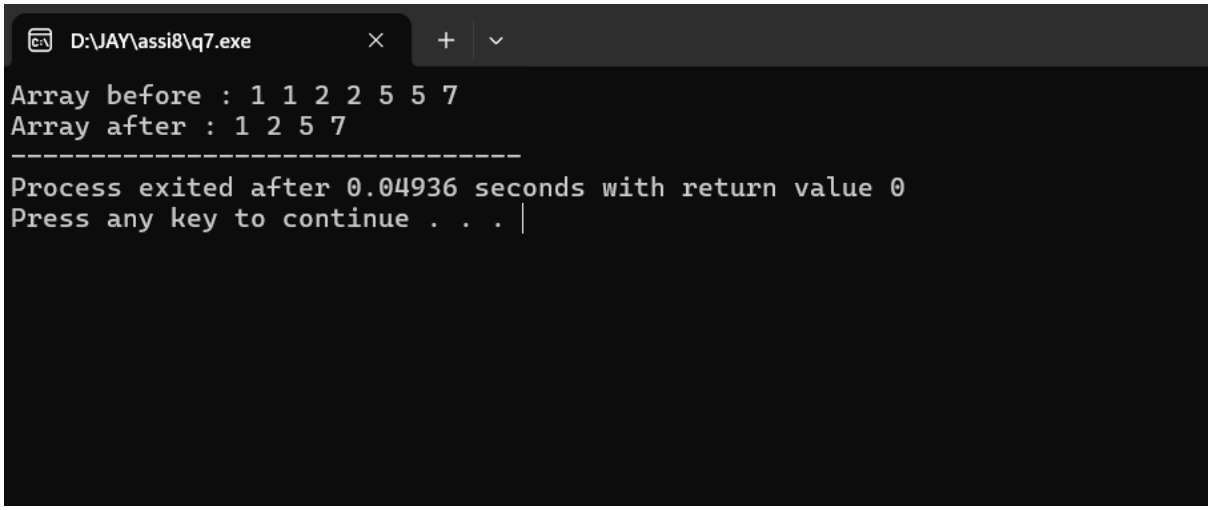



```
#include <stdio.h>
int main(){
        int arr1[5]={5,3,6,7,8};
        int arr2[5]={2,9,4,11,10};
        int arr3[10];
        float median;
        for(int i=0;i<10;i++){
                if(i<5){
                        arr3[i]=arr1[i];
```

```
        }
        else{
                arr3[i]=arr2[i-5];
        }
}
int n=10;

int count=0;
while(count<=n){
        for(int j=0;j<n-1;j++){
                if(arr3[j]>arr3[j+1]){
                        int temp=arr3[j];
                        arr3[j]=arr3[j+1];
                        arr3[j+1]=temp;
                }
        }
        count++;
}
for(int k=0;k<10;k++){
        printf("%d ",arr3[k]);
}
if(n%2==0){
        median = arr3[(n/2)-1]+arr3[(n/2)];
}
else{
        median = arr3[n/2];
```

```
    }
    printf("median is : %.2f",median);
    return 0;

}
```

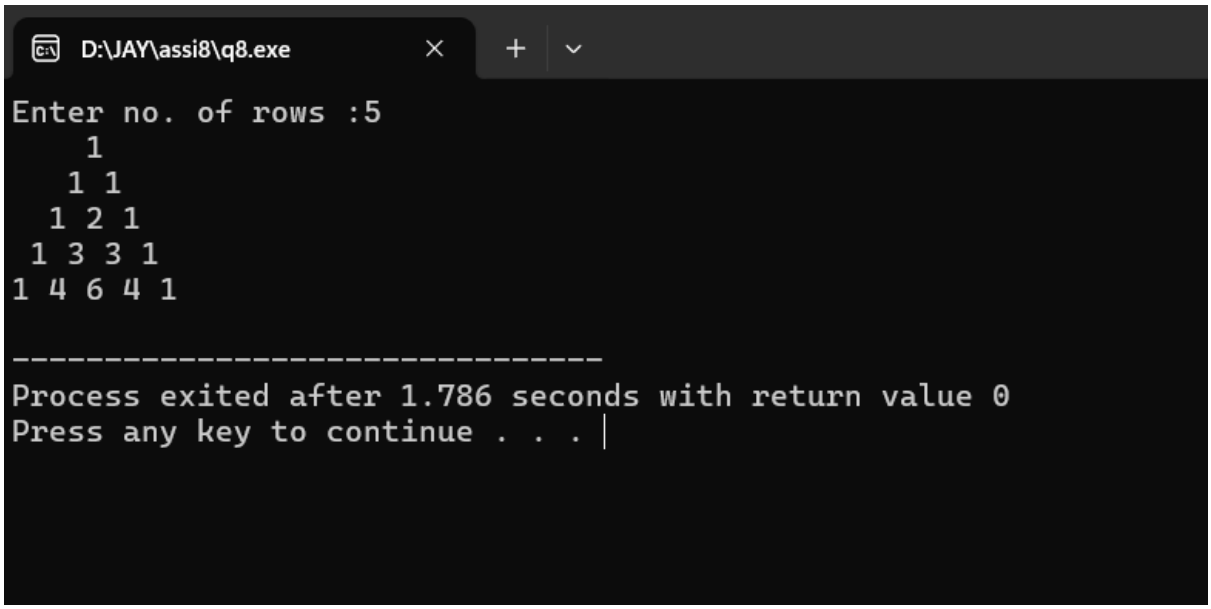
Q-7.




```
#include <stdio.h>
int main(){
    int arr[7]={1,1,2,2,5,5,7};
    printf("Array before : ");
    for(int i=0;i<7;i++){
        printf("%d ",arr[i]);
    }
    int j=0;
    for(int i=1;i<7;i++){
        if(arr[i]!=arr[j]){
            j++;
```

```
                    arr[j]=arr[i];
                }
        }

        printf("\nArray after : ");

        for(int i=0;i<j+1;i++){
                printf("%d ",arr[i]);
        }


        return 0;
}
```

Q-8.

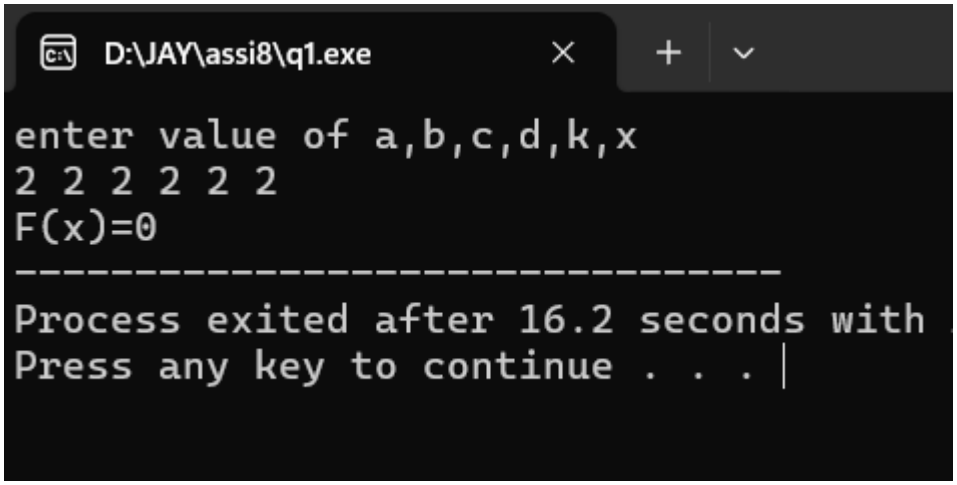



```
#include <stdio.h>

int com(int n,int m){
```

```
	if(n==0 || m==0){
		return 1;
	}
	if(m==n){
		return 1;
	}
	int p=1;
	for(int i=1;i<=n;i++){
		p*=i;

	}
	int q=1;
	for(int i=1;i<=m;i++){
		q*=i;
	}
	int t=1;
	for(int i=1;i<=(n-m);i++){
		t*=i;
	}

	return p/(t*q);

}
int main(){
	int r;
	com(3,1);
```

```
        printf("Enter no. of rows :");
        scanf("%d",&r);
        for(int i=0;i<r;i++){
                for(int j=0;j<r-i-1;j++){
                        printf(" ");
                }
                for(int k=0;k<=i;k++){
                        printf("%d ",com(i,k));
                }
                printf("\n");
        }
        return 0;
}
```

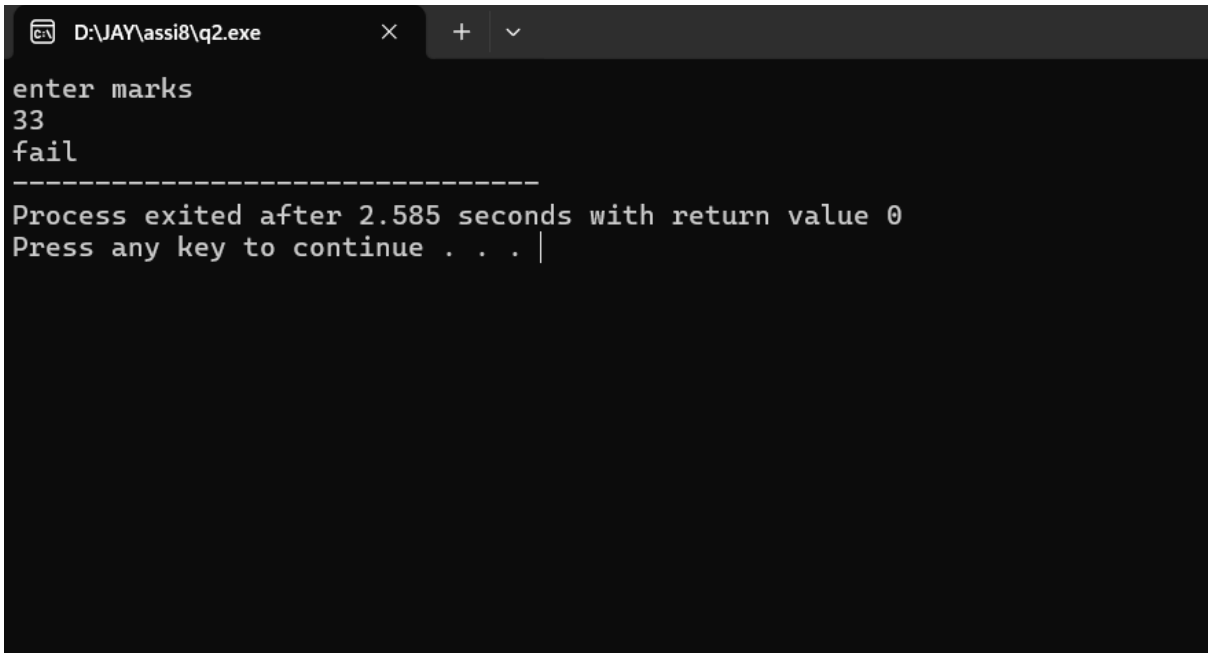
Q-1.




```
#include <stdio.h>
int main(){
	int a,b,c,d,k,x;
	printf("enter value of a,b,c,d,k,x \n");
	scanf("%d %d %d %d %d %d",&a,&b,&c,&d,&k,&x);
	if(x>k){
		int f=a*x*x*x-b*x*x+c*x-d;
		printf("F(x)=%d",f);
	}
	else if(x==k){
		printf("F(x)=0");
	}
	else{
		int f=-a*x*x*x+b*x*x-c*x+d;
		printf("F(x)=%d",f);
```

```
    }
    return 0;
}
```

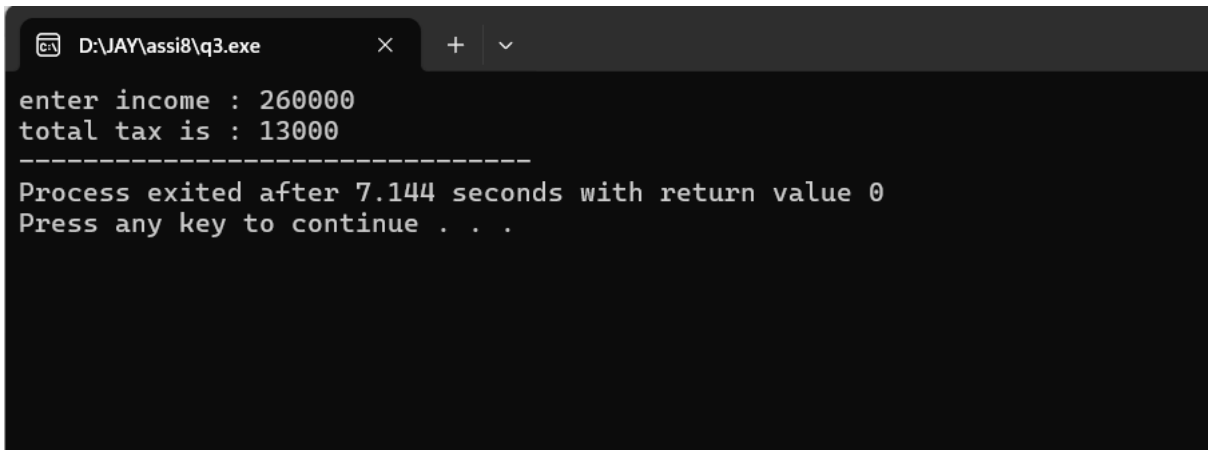
Q-2.




```
#include <stdio.h>
int main(){
    int n;
    printf("enter marks\n");
    scanf("%d",&n);
    if(n<0 || n>100){
        printf("invalid input ");
    }
    else if(n>=80){
        printf("Dinstinction");
    }
```

```
        else if(n>=60){
                printf("First class");
        }
        else if(n>=35){
                printf("second");
        }
        else{
                printf("fail");
        }
        return 0;
}
```

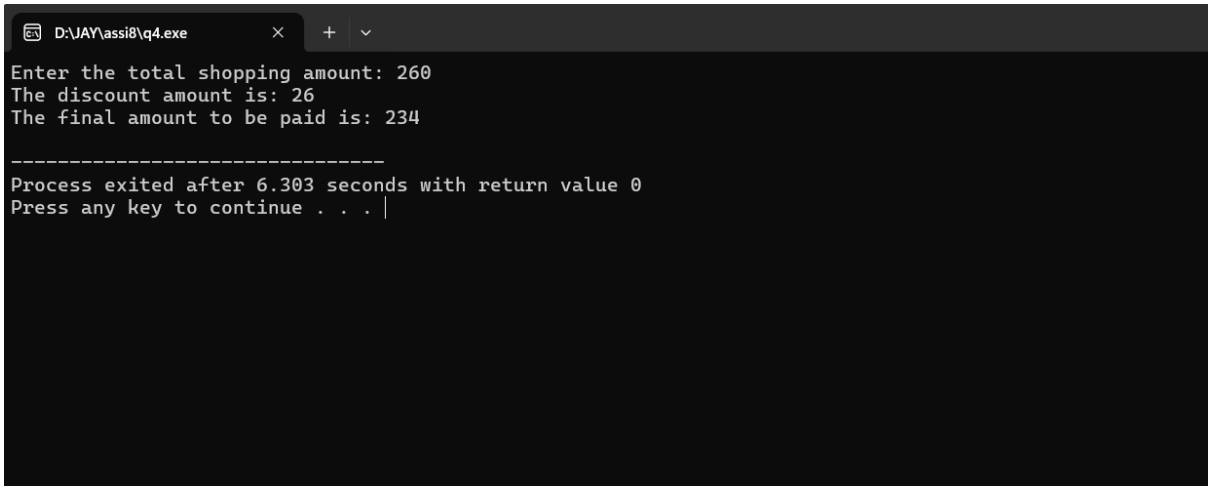
Q-3.




```
#include <stdio.h>
int main(){
        int inc;
        int tax;
        printf("enter income : ");
        scanf("%d",&inc);
```

```
    if(inc>=250000&&inc<=500000){
        tax = inc*5/100;
    }
    else if(inc>500000 && inc<=1000000){
        tax = 250000*5/100+(inc-500000)*20/100;
    }
    else if(inc>=1000000){
        tax = 250000*5/100 + 500000*20/100 + (inc-1000000)*30/100;
    }
    else{
        printf("no tax applicable");
        tax=0;
    }
    printf("total tax is : %d",tax);
    return 0;
}
```

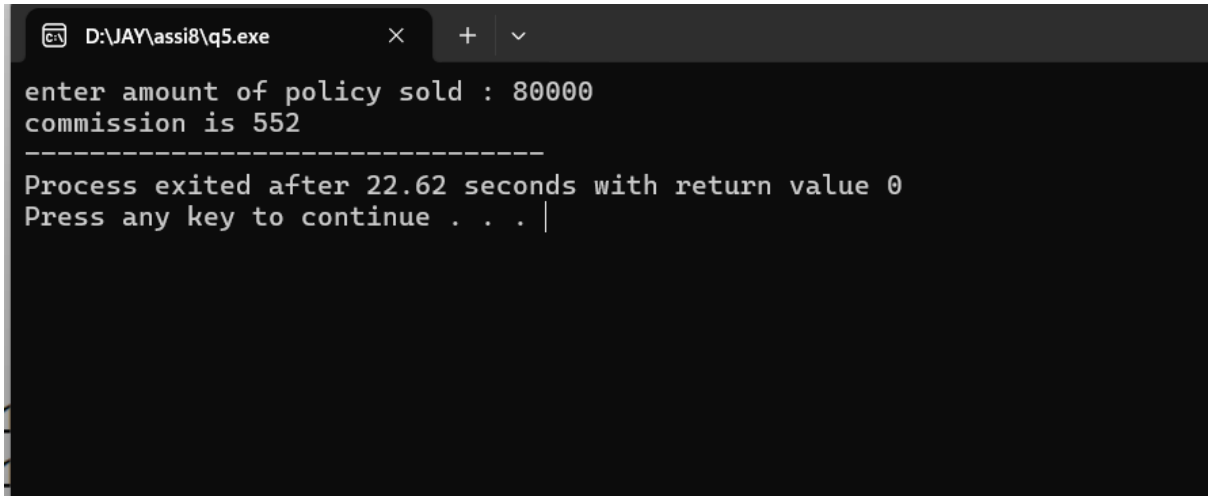
Q-4.




```
#include <stdio.h>

int main() {
    int totalAmount, discount = 0.0, finalAmount;

    printf("Enter the total shopping amount: ");
    scanf("%d", &totalAmount);

    if (totalAmount >= 100 && totalAmount <= 200) {
        discount = totalAmount * 0.05;
    } else if (totalAmount > 200 && totalAmount <= 400) {
        discount = totalAmount * 0.10;
    } else if (totalAmount > 400 && totalAmount <= 800) {
        discount = totalAmount * 0.20;
    } else if (totalAmount > 800) {
        discount = totalAmount * 0.25;
    }

    finalAmount = totalAmount - discount;
```

```
    printf("The discount amount is: %d\n", discount);
    printf("The final amount to be paid is: %d\n", finalAmount);

    return 0;
}
```

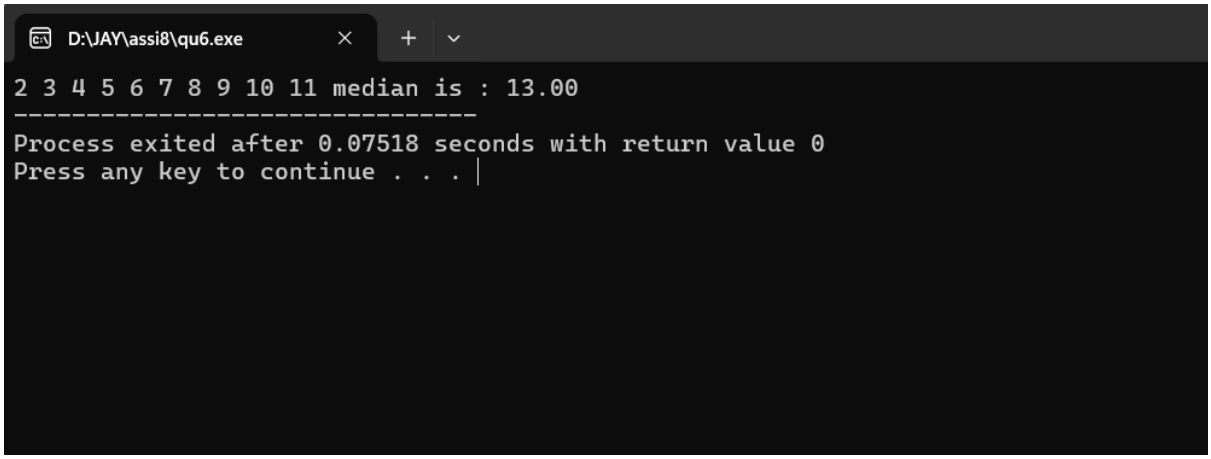
Q-5.




```
#include <stdio.h>
int main(){
        int amount;
        printf("enter amount of policy sold : ");
        scanf("%d",&amount);
        int commission;
        if (amount <= 10000)
        { commission = amount * 0.005;
        }
        else if (amount > 10000 && amount < 25000)
        {
                commission = 50 + (amount - 10000) * 0.006;
```

```
        }
        else {
         commission = 140 + (amount - 25000) * 0.0075;
        }
        printf("commission is %d",commission);
        return 0;
}
```

Q-6.

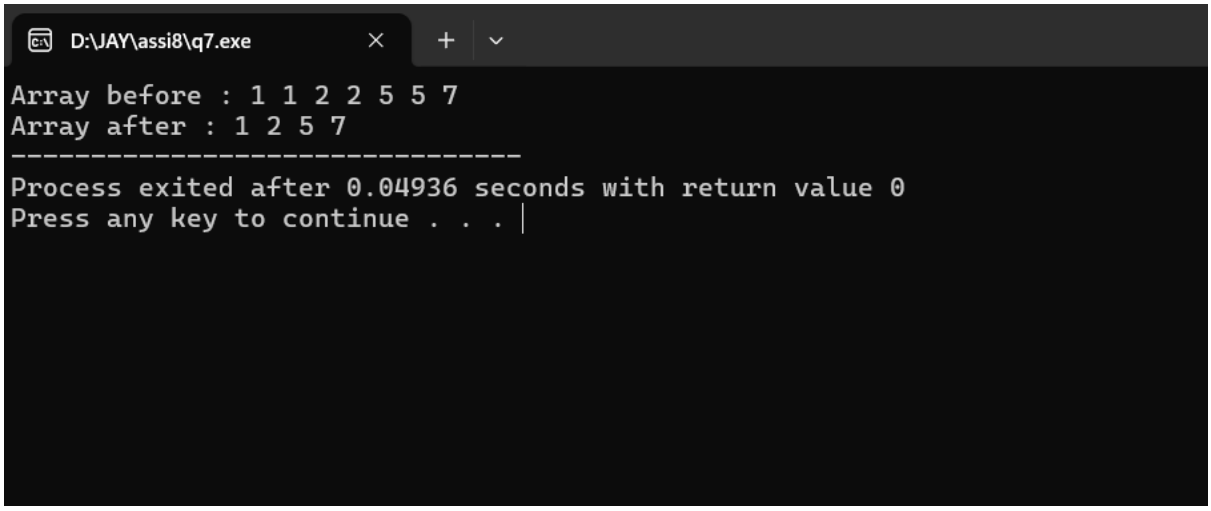



```
#include <stdio.h>
int main(){
        int arr1[5]={5,3,6,7,8};
        int arr2[5]={2,9,4,11,10};
        int arr3[10];
        float median;
        for(int i=0;i<10;i++){
                if(i<5){
                        arr3[i]=arr1[i];
                }
```

```
        else{
                arr3[i]=arr2[i-5];
        }
}
int n=10;

int count=0;
while(count<=n){
        for(int j=0;j<n-1;j++){
                if(arr3[j]>arr3[j+1]){
                        int temp=arr3[j];
                        arr3[j]=arr3[j+1];
                        arr3[j+1]=temp;
                }
        }
        count++;
}
for(int k=0;k<10;k++){
        printf("%d ",arr3[k]);
}
if(n%2==0){
        median = arr3[(n/2)-1]+arr3[(n/2)];
}
else{
        median = arr3[n/2];
}
```

```
    printf("median is : %.2f",median);
    return 0;

}
```

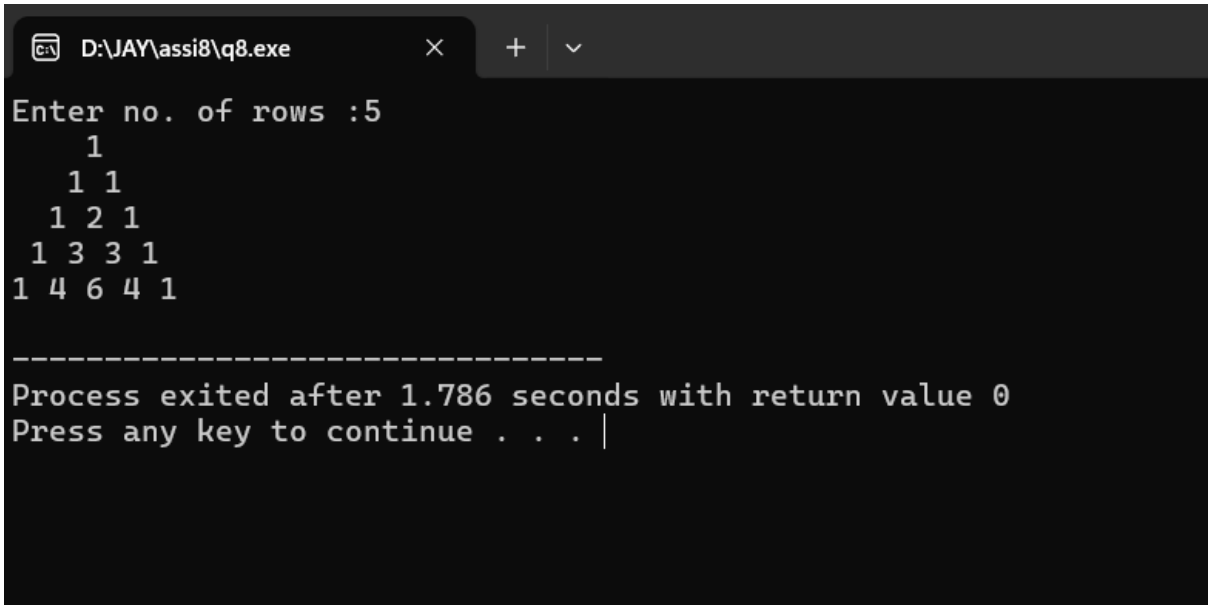
Q-7.




```
#include <stdio.h>
int main(){
    int arr[7]={1,1,2,2,5,5,7};
    printf("Array before : ");
    for(int i=0;i<7;i++){
        printf("%d ",arr[i]);
    }
    int j=0;
    for(int i=1;i<7;i++){
        if(arr[i]!=arr[j]){
            j++;
            arr[j]=arr[i];
```

```
            }
        }

        printf("\nArray after : ");

        for(int i=0;i<j+1;i++){
            printf("%d ",arr[i]);
        }


        return 0;
}
```

Q-8.



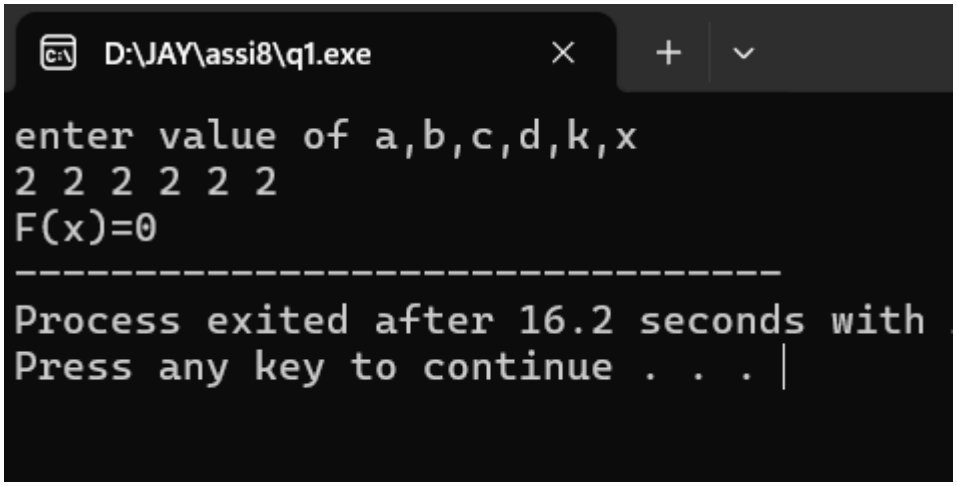

```
#include <stdio.h>

int com(int n,int m){
        if(n==0 || m==0){
```

```
        return 1;
    }
    if(m==n){
        return 1;
    }
    int p=1;
    for(int i=1;i<=n;i++){
        p*=i;

    }
    int q=1;
    for(int i=1;i<=m;i++){
        q*=i;
    }
    int t=1;
    for(int i=1;i<=(n-m);i++){
        t*=i;
    }

    return p/(t*q);

}
int main(){
    int r;
    com(3,1);
    printf("Enter no. of rows :");
```

```
    scanf("%d",&r);
    for(int i=0;i<r;i++){
        for(int j=0;j<r-i-1;j++){
            printf(" ");
        }
        for(int k=0;k<=i;k++){
            printf("%d ",com(i,k));
        }
        printf("\n");
    }
    return 0;
}
```

NAME : JAY U24CS026

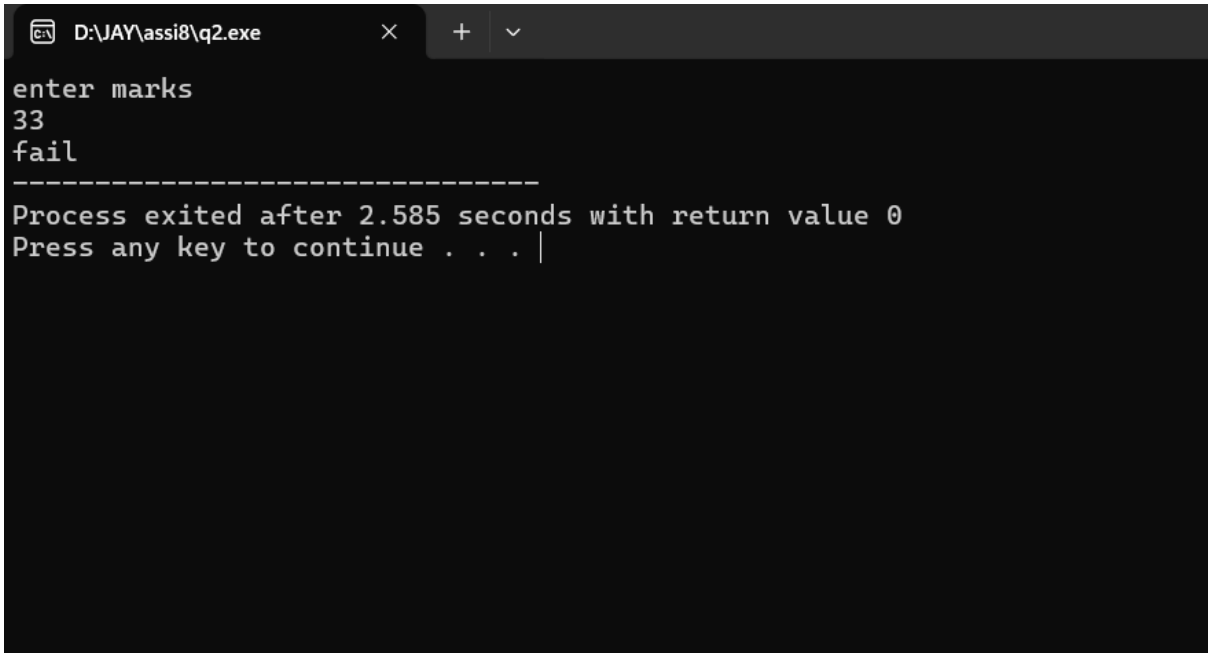
Q-1.




```
#include <stdio.h>
int main(){
	int a,b,c,d,k,x;
	printf("enter value of a,b,c,d,k,x \n");
	scanf("%d %d %d %d %d %d",&a,&b,&c,&d,&k,&x);
	if(x>k){
		int f=a*x*x*x-b*x*x+c*x-d;
		printf("F(x)=%d",f);
	}
	else if(x==k){
		printf("F(x)=0");
	}
	else{
```

```
        int f=-a*x*x*x+b*x*x-c*x+d;
        printf("F(x)=%d",f);
    }
    return 0;
}
```

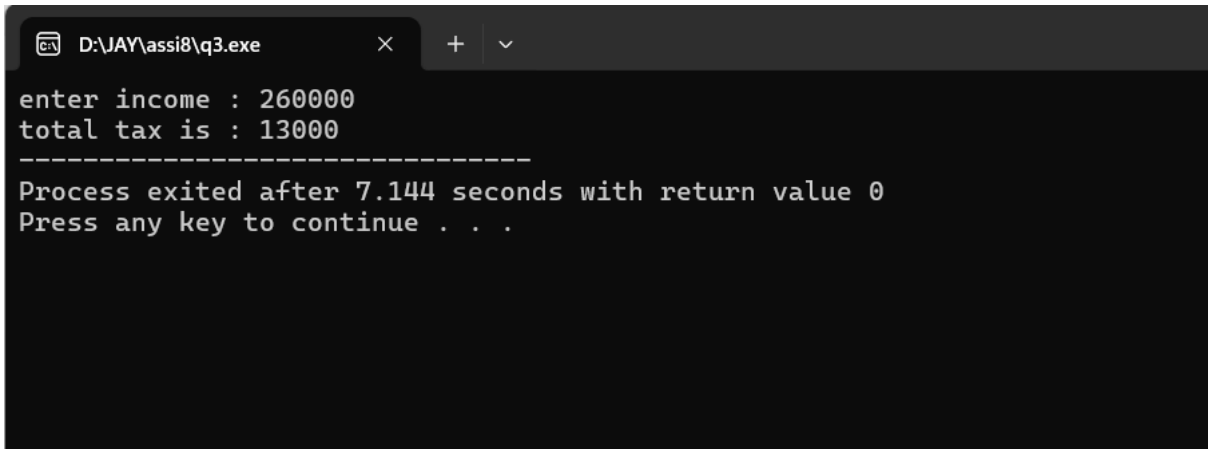
Q-2.




```
#include <stdio.h>
int main(){
    int n;
    printf("enter marks\n");
    scanf("%d",&n);
    if(n<0 || n>100){
        printf("invalid input ");
    }
    else if(n>=80){
```

```
            printf("Dinstinction");
        }
        else if(n>=60){
            printf("First class");
        }
        else if(n>=35){
            printf("second");
        }
        else{
            printf("fail");
        }
        return 0;
}
```

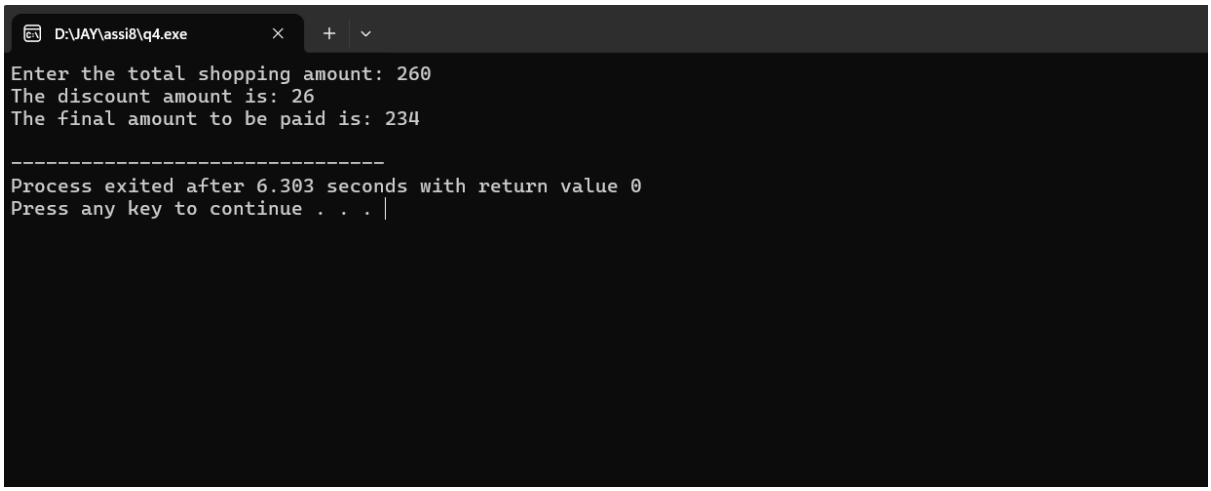
Q-3.




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

```
        printf("enter income : ");
        scanf("%d",&inc);
        if(inc>=250000&&inc<=500000){
                tax = inc*5/100;
        }
        else if(inc>500000 && inc<=1000000){
                tax = 250000*5/100+(inc-500000)*20/100;
        }
        else if(inc>=1000000){
                tax = 250000*5/100 + 500000*20/100 + (inc-1000000)*30/100;
        }
        else{
                printf("no tax applicable");
                tax=0;
        }
        printf("total tax is : %d",tax);
        return 0;
}
```

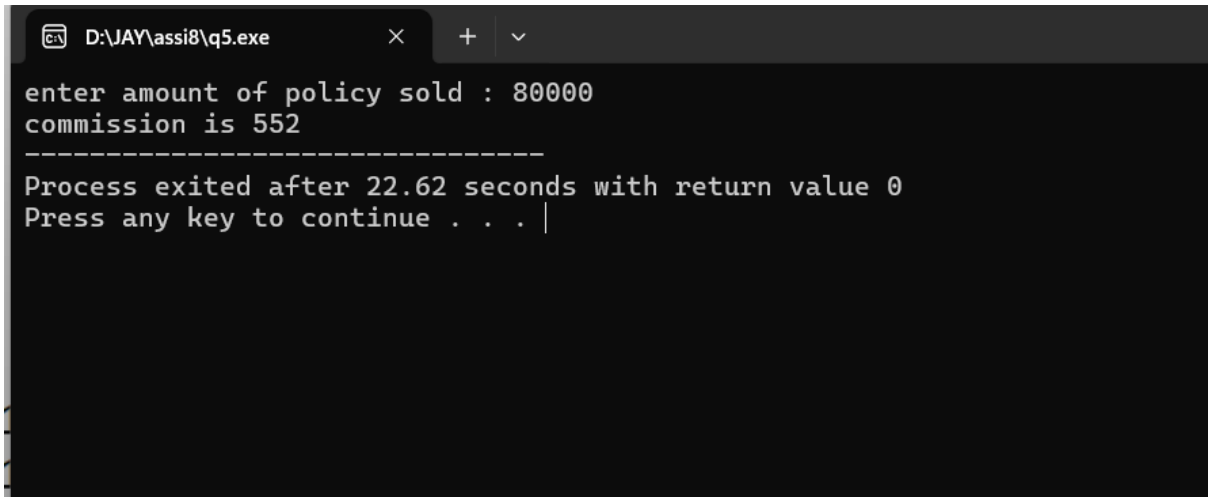
Q-4.




```
#include <stdio.h>

int main() {
    int totalAmount, discount = 0.0, finalAmount;

    printf("Enter the total shopping amount: ");
    scanf("%d", &totalAmount);

    if (totalAmount >= 100 && totalAmount <= 200) {
        discount = totalAmount * 0.05;
    } else if (totalAmount > 200 && totalAmount <= 400) {
        discount = totalAmount * 0.10;
    } else if (totalAmount > 400 && totalAmount <= 800) {
        discount = totalAmount * 0.20;
    } else if (totalAmount > 800) {
        discount = totalAmount * 0.25;
    }
```

```
    finalAmount = totalAmount - discount;
    printf("The discount amount is: %d\n", discount);
    printf("The final amount to be paid is: %d\n", finalAmount);

    return 0;
}
```

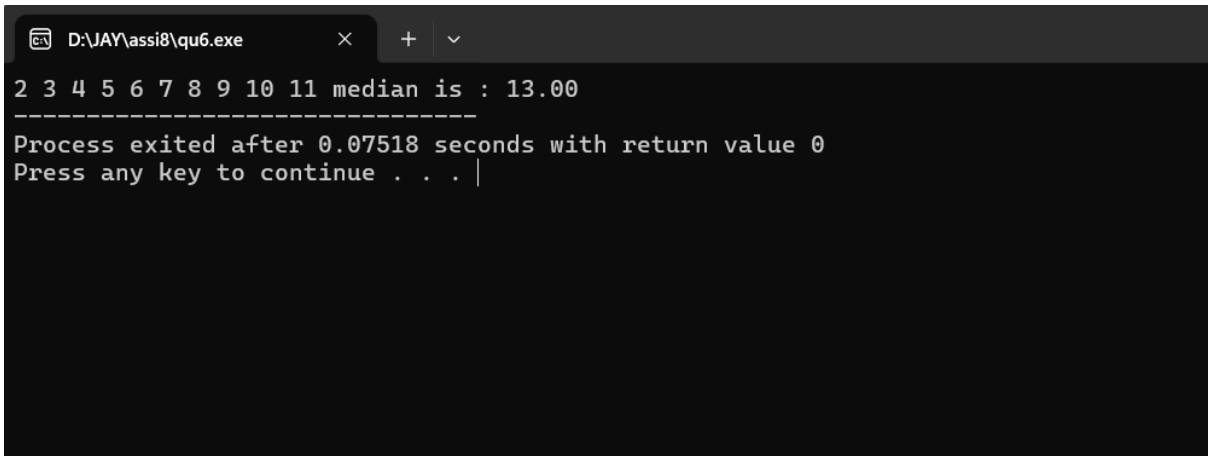
Q-5.




```
#include <stdio.h>
int main(){
        int amount;
        printf("enter amount of policy sold : ");
        scanf("%d",&amount);
        int commission;
        if (amount <= 10000)
        { commission = amount * 0.005;
        }
        else if (amount > 10000 && amount < 25000)
        {
```

```
            commission = 50 + (amount - 10000) * 0.006;
        }
        else {
         commission = 140 + (amount - 25000) * 0.0075;
        }
        printf("commission is %d",commission);
        return 0;
}
```

Q-6.

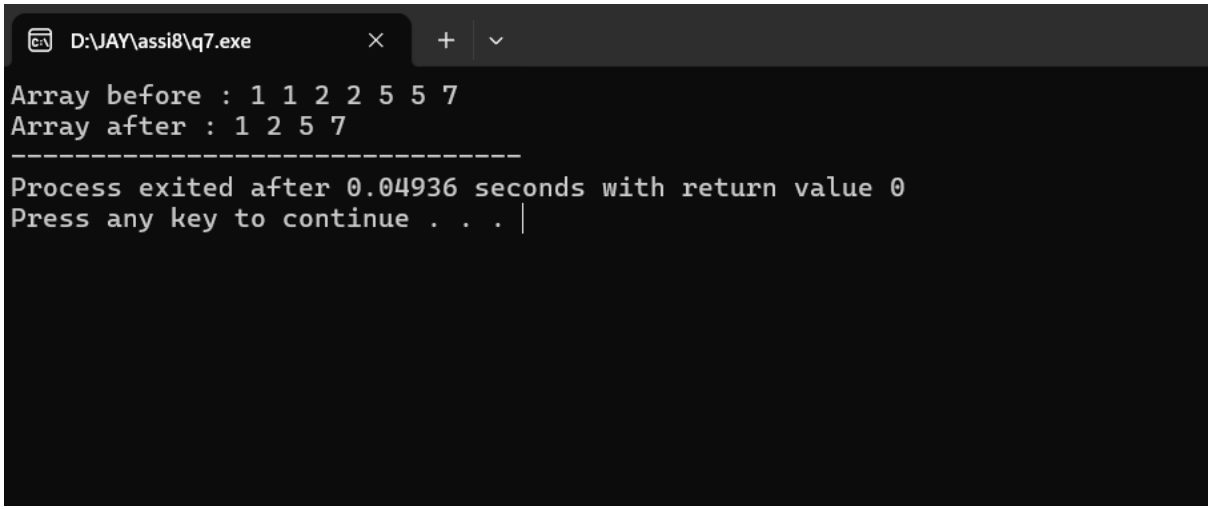



```
#include <stdio.h>
int main(){
        int arr1[5]={5,3,6,7,8};
        int arr2[5]={2,9,4,11,10};
        int arr3[10];
        float median;
        for(int i=0;i<10;i++){
                if(i<5){
                        arr3[i]=arr1[i];
```

```
        }
        else{
                arr3[i]=arr2[i-5];
        }
}
int n=10;

int count=0;
while(count<=n){
        for(int j=0;j<n-1;j++){
                if(arr3[j]>arr3[j+1]){
                        int temp=arr3[j];
                        arr3[j]=arr3[j+1];
                        arr3[j+1]=temp;
                }
        }
        count++;
}
for(int k=0;k<10;k++){
        printf("%d ",arr3[k]);
}
if(n%2==0){
        median = arr3[(n/2)-1]+arr3[(n/2)];
}
else{
        median = arr3[n/2];
```

```
    }
    printf("median is : %.2f",median);
    return 0;

}
```

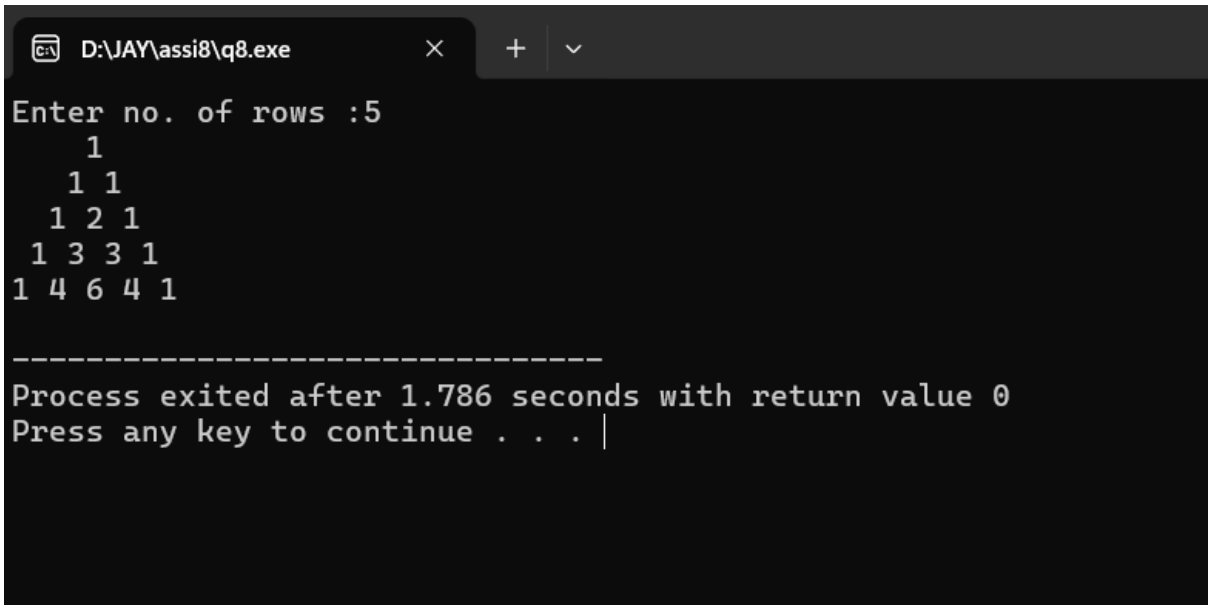
Q-7.




```
#include <stdio.h>
int main(){
    int arr[7]={1,1,2,2,5,5,7};
    printf("Array before : ");
    for(int i=0;i<7;i++){
        printf("%d ",arr[i]);
    }
    int j=0;
    for(int i=1;i<7;i++){
        if(arr[i]!=arr[j]){
            j++;
```

```
                    arr[j]=arr[i];
                }
        }

        printf("\nArray after : ");

        for(int i=0;i<j+1;i++){
                printf("%d ",arr[i]);
        }


        return 0;
}
```

Q-8.




```
#include <stdio.h>

int com(int n,int m){
```

```
	if(n==0 || m==0){
		return 1;
	}
	if(m==n){
		return 1;
	}
	int p=1;
	for(int i=1;i<=n;i++){
		p*=i;

	}
	int q=1;
	for(int i=1;i<=m;i++){
		q*=i;
	}
	int t=1;
	for(int i=1;i<=(n-m);i++){
		t*=i;
	}

	return p/(t*q);

}
int main(){
	int r;
	com(3,1);
```

```
        printf("Enter no. of rows :");
        scanf("%d",&r);
        for(int i=0;i<r;i++){
                for(int j=0;j<r-i-1;j++){
                        printf(" ");
                }
                for(int k=0;k<=i;k++){
                        printf("%d ",com(i,k));
                }
                printf("\n");
        }
        return 0;
}
```