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COMPUTER PROGRAMMING

ASSIGNMENT NO. 1

SUBMITTED BY: -

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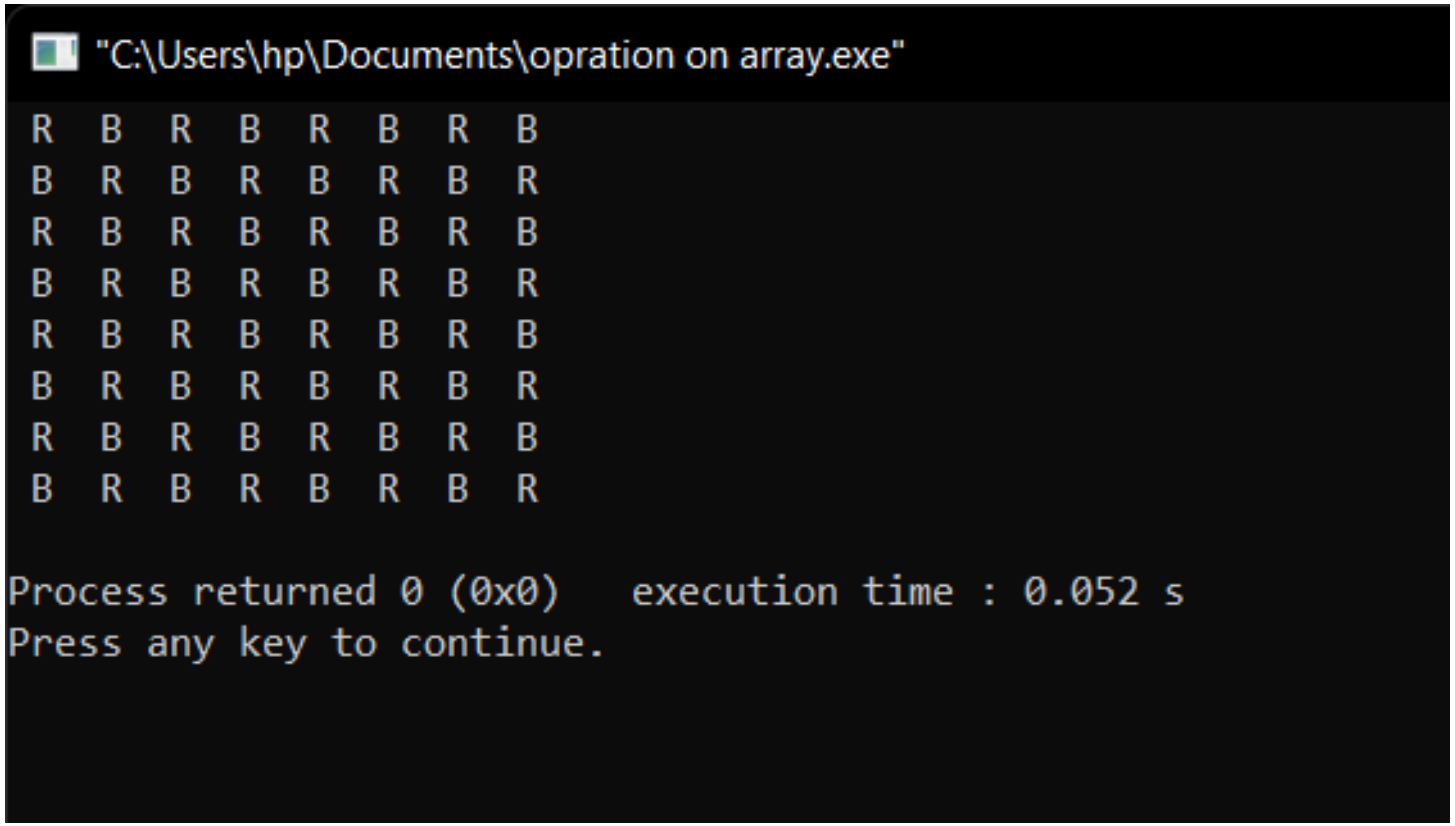
submitted to : Dr shefali arora

Q-1 making a 8 x 8 chessboard : code

```
#include<stdio.h>
main()
{
int i,j;
int a[7][7];
for(i=0;i<8;i++)
{
 for(j=0;j<8;j++)
 {
 if((i+j)%2==0)
 printf(" R ");
 else
 printf(" B "); }
 printf("\n");
}
return 0;}
```

Q-1 : output


"C:\Users\hp\Documents\opration on array.exe"
R B R B R B R B
B R B R B R B R
R B R B R B R B
B R B R B R B R
R B R B R B R B
B R B R B R B R
R B R B R B R B
B R B R B R B R
Process returned 0 (0x0) execution time : 0.052 s
Press any key to continue.

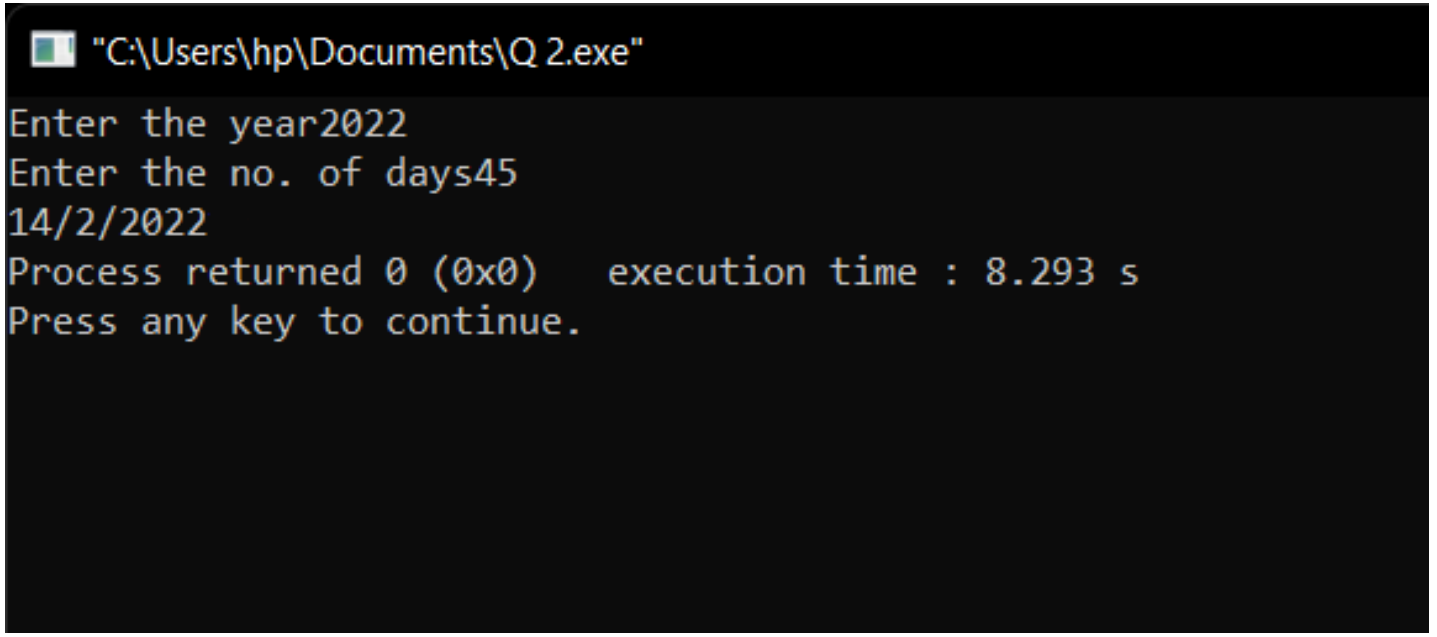
Q2 - entring the dates

```
#include<stdio.h>
main()
{
int y,d;
printf("Enter the year");
scanf("%d",&y);
printf("Enter the no. of days");
scanf("%d",&d);
if(y%400==0||y%4==0&&y%100!=0)
printf("Leap year ");
 else if(d<=31)
printf("%d/1/%d",d,y);
else if(d>31&&d<=60)
printf("%d/2/%d",d-31,y);
else if(d>60&&d<=91)
printf("%d/3/%d",d-60,y);
else if(d>91&&d<=121)
```

```
else if(d>152&&d<=182)
printf("%d/6/%d",d-152,y);
else if(d>182&&d<=213)
printf("%d/7/%d",d-182,y);
else if(d>213&&d<=244)
printf("%d/8/%d",d-213,y);
else if(d>244&&d<=274)
printf("%d/9/%d",d-244,y);
else if(d>274&&d<=305)
printf("%d/10/%d",d-274,y);
else if(d>305&&d<=335)
printf("%d/11/%d",d-305,y);
else if(d>335&&d<=366)
printf("%d/12/%d",d-335,y);
else
printf("Not a leap year ");
{
```

```
if(d<31)
printf("%d/1/%d",d,y);
 else if(d>31&&d<=59)
printf("%d/2/%d",d-31,y);
else if(d>59&&d<=90)
printf("%d/3/%d",d-59,y);
else if(d>90&&d<=120)
printf("%d/4/%d",d-90,y);
else if(d>120&&d<=151)
printf("%d/5/%d",d-120,y);
else if(d>151&&d<=181)
printf("%d/6/%d",d-151,y);
else if(d>181&&d<=212)
printf("%d/7/%d",d-181,y);
else if(d>212&&d<=243)
printf("%d/8/%d",d-212,y);
else if(d>243&&d<=273)
printf("%d/9/%d",d-243,y);
else if(d>273&&d<=304)
printf("%d/10/%d",d-273,y);
else if(d>304&&d<=334)
printf("%d/11/%d",d-304,y);
else if(d>334&&d<=365)
printf("%d/12/%d",d-334,y);}}
```

Q-2 OUTPUT


"C:\Users\hp\Documents\Q 2.exe"
Enter the year2022
Enter the no. of days45
14/2/2022
Process returned 0 (0x0)   execution time : 8.293 s
Press any key to continue.

Q-3 CARDS :CODE

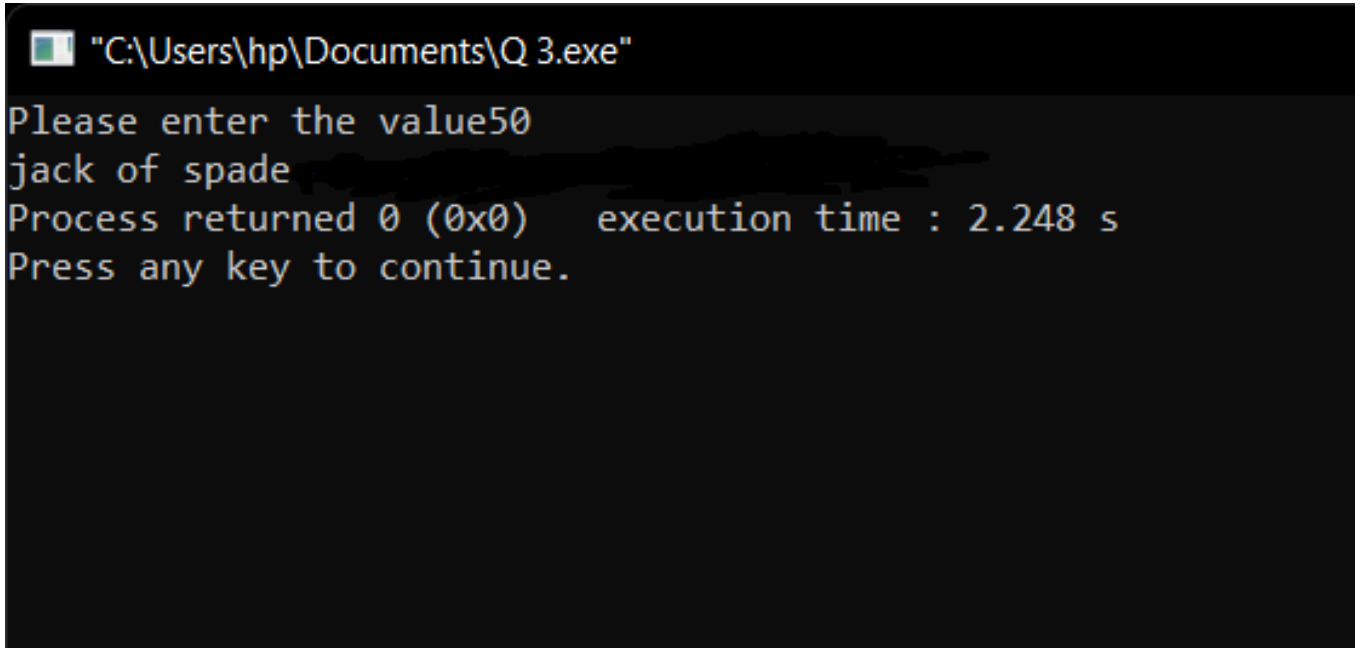
```
#include<stdio.h>
main()
{
int a,b,c,d;
printf("Please enter the value");
scanf("%d",&a);
if(a>0&&a<14)
{
 if((a<11)&&(a>1))
 {printf("%d of club",a);}
 if(a=11)
 {printf("jack of club");}
 if(a=12)
 { printf("queen of club");}
 if(a=13)
 { printf("king of club");}
 else
 { printf("ace of club");}
}
else if (a>13&&a<27)
{
 if(a<24&&a>14)
 {printf("%d of heart",a-13);}
 else if(a=24)
 {printf("jack of heart");}
```

```
else if(a=25)
 {printf("queen of heart");}
 else if(a=26)
 {printf("king of heart");}
 else
 {printf("ace of heart");}
}
else if (a>26&&a<40)
{
if(a<37&&a>27)
{ printf("%d of diamond",a-26);}
 if(a=37)
 {printf("jack of diamond");}
 if(a=38)
 {printf("queen of diamond");}
 if(a=39)
 {printf("king of diamond");}
 else
 {printf("ace of diamond");}

}
```

```
else
{
if(a<50&&a>40)
 {printf("%d of spade",a-39);}
 if(a=50)
 {printf("jack of spade");}
if(a=51)
 {printf("queen of spade");
 }
 if(a=52)
 { printf("king of spade");}
 else
 {printf("ace of spade");}
}}
```

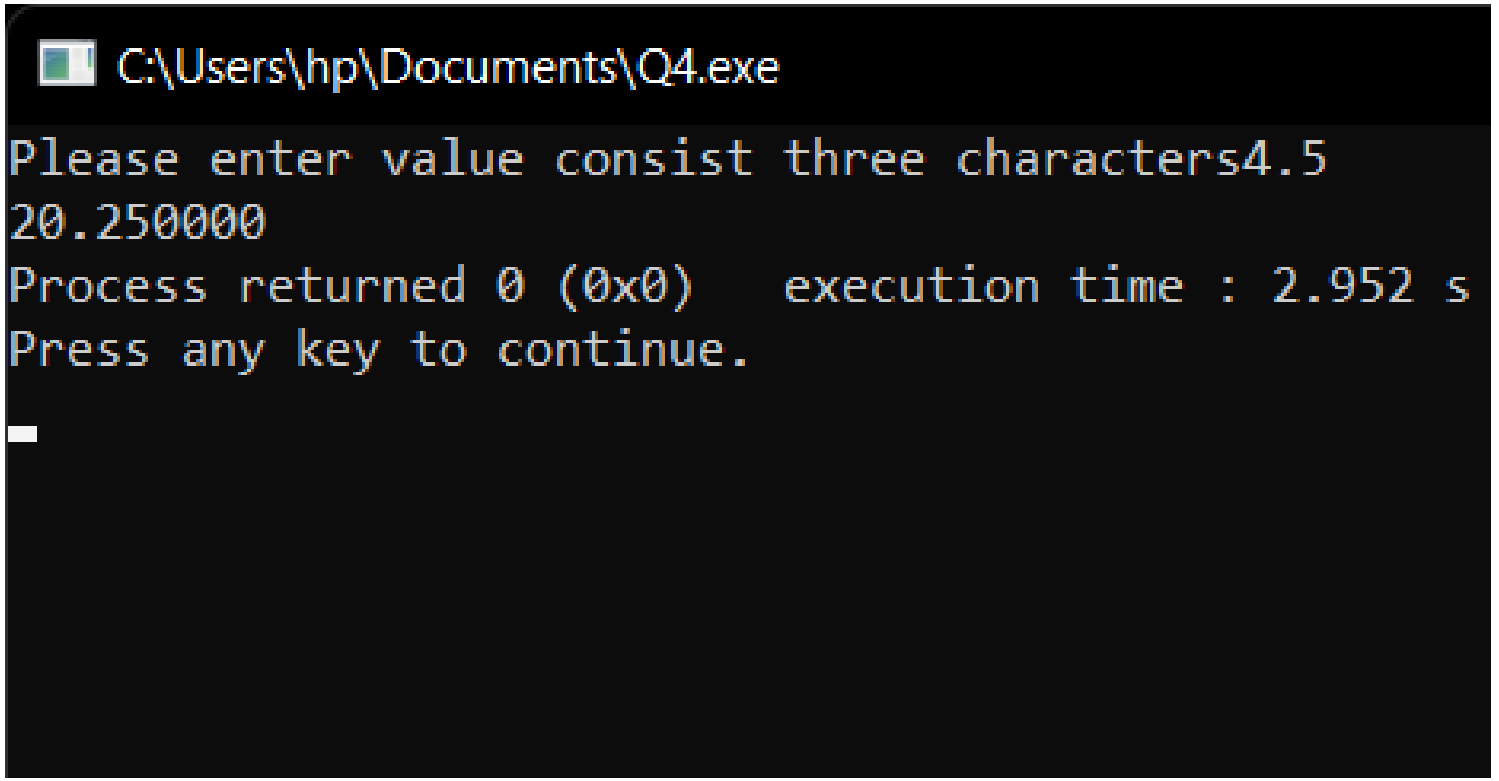
Q 3 OUT PUT


"C:\Users\hp\Documents\Q 3.exe"
Please enter the value50
jack of spade
Process returned 0 (0x0)   execution time : 2.248 s
Press any key to continue.

Q4 –SQUARE OF DECIMAL :CODE

```
#include<stdio.h>
main()
{
float a,b,c;
printf("Please enter value consist three characters");
scanf("%f",&a);
if(a<10)
{
b=a*a;
printf("%f",b);
}
else
printf("Input is invalid");
}
```

Q4 –SQUARE OF DECIMAL : OUTPUT

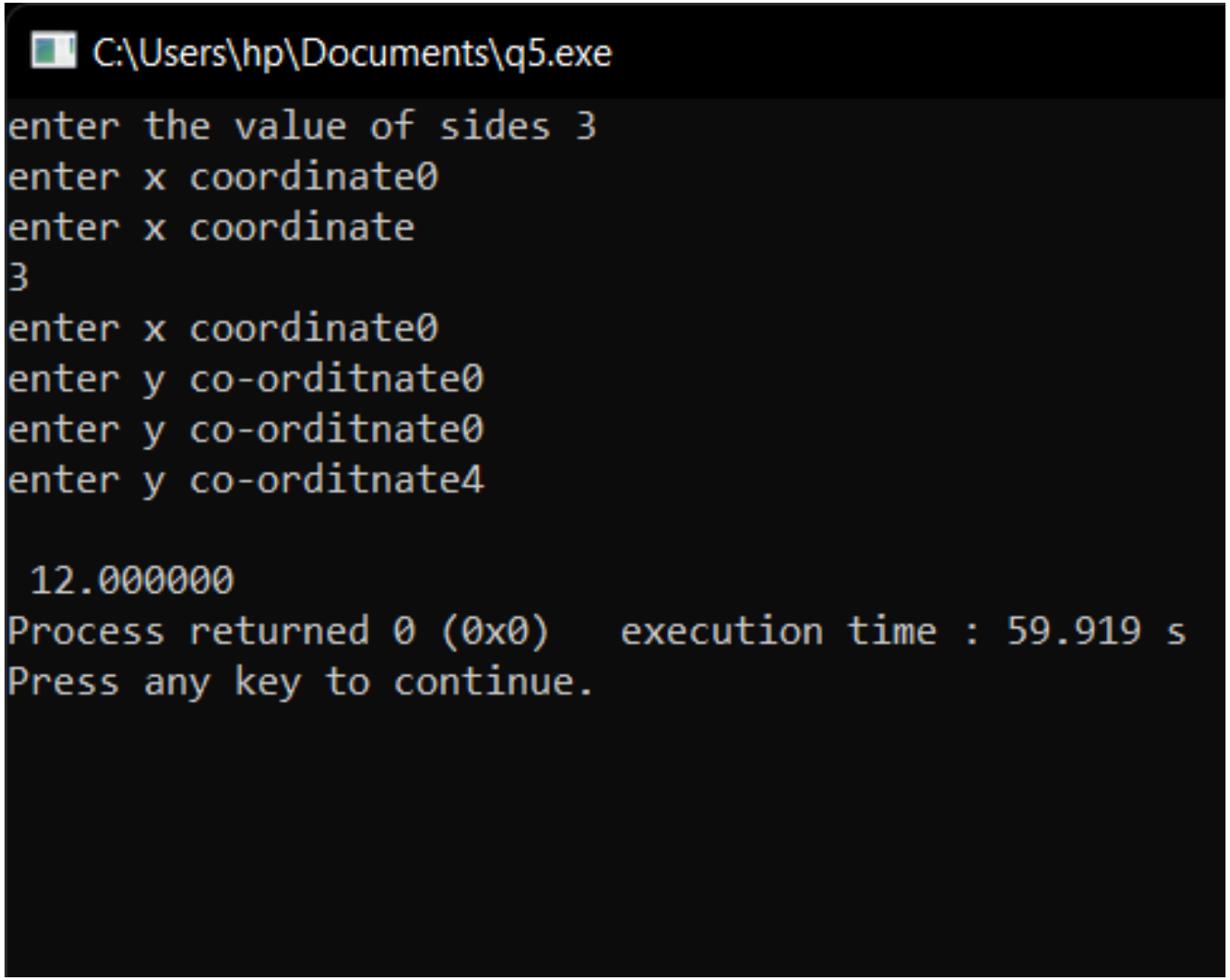


Q5- primeter

```
#include<stdio.h>
#include<math.h>
main()
{
int n,i,j;
float perimeter;
int a[100];
int b[100];
printf("enter the value of sides ");
scanf("%d",&n);
perimeter = 0;
for(i=0;i<=(n-1);i++)
{
printf( "enter x coordinate");
 scanf("%d",&a[i]);
}
for(j=0;j<=(n-1);j++)
{printf("enter y co-orditnate");
 scanf("%d",&b[j]);
}
for(i=0;i<=(n-2);i++)
{
 perimeter = perimeter + sqrt((a[i+1]-a[i])*(a[i+1]-a[i])+(b[i+1]-
b[i])*(b[i+1]-b[i]));
}

perimeter = perimeter + sqrt((a[n-1]-a[0])*(a[n-1]-a[0])+(b[n-1]-
b[0])*(b[n-1]-b[0]));
printf("\n %f",perimeter);
}
```

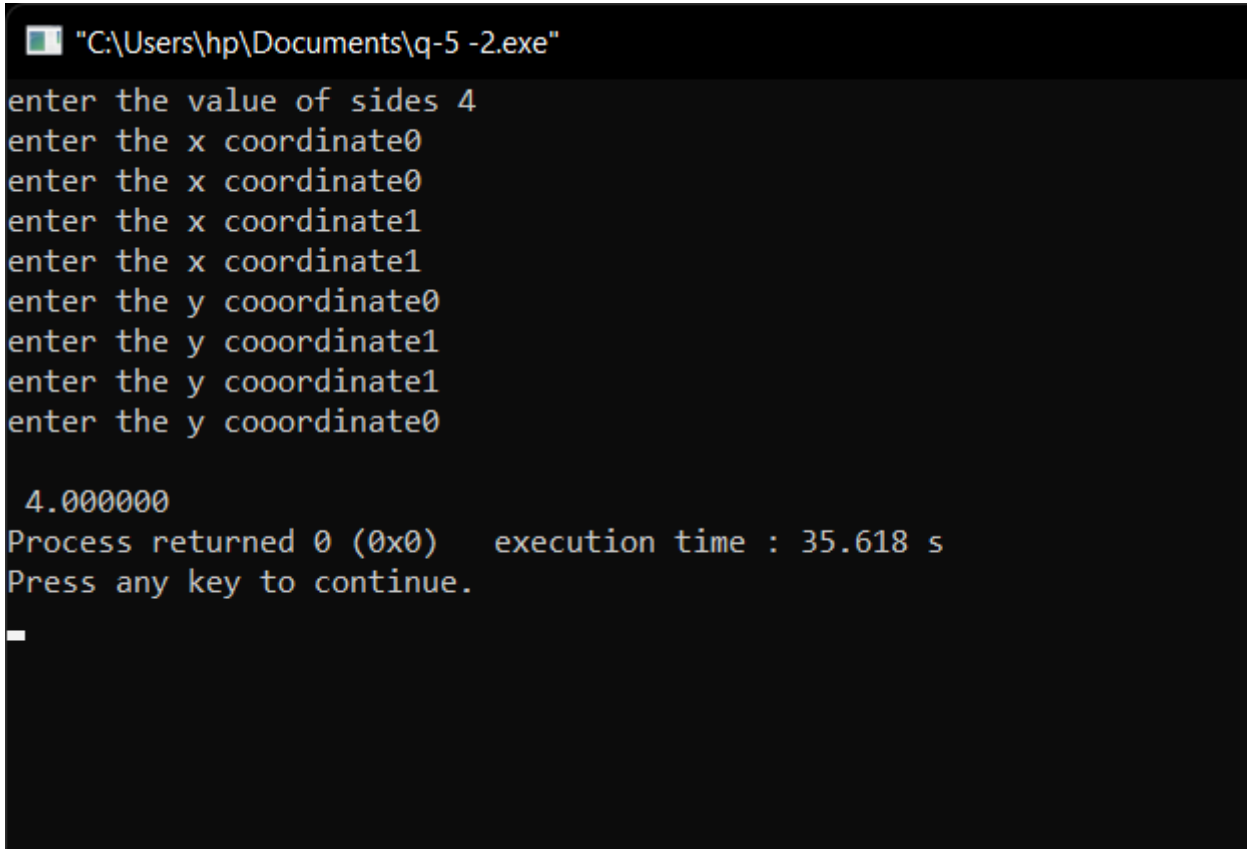
Q-5 output


C:\Users\hp\Documents\q5.exe
enter the value of sides 3
enter x coordinate0
enter x coordinate
3
enter x coordinate0
enter y co-orditnate0
enter y co-orditnate0
enter y co-orditnate4
12.000000
Process returned 0 (0x0) execution time : 59.919 s
Press any key to continue.

Q5 PART 2

```
#include<stdio.h>
#include<math.h>
main()
{
int n,i=0,j=0,k=0;
float perimeter;
int a[100];
int b[100];
printf("enter the value of sides ");
scanf("%d",&n);
perimeter = 0;
while(i<=n-1)
{printf("enter the x coordinate");
 scanf("%d",&a[i]);
 i++;
}
while(j<=n-1)
{printf("enter the y coordinate");
 scanf("%d",&b[j]);
 j++;
}
while(k<=n-2)
{
 perimeter = perimeter + sqrt((a[k+1]-a[k])*(a[k+1]-a[k])+(b[k+1]-
b[k])*(b[k+1]-b[k]));
 k++;
}
perimeter = perimeter + sqrt((a[n-1]-a[0])*(a[n-1]-a[0])+(b[n-1]-
b[0])*(b[n-1]-b[0]));
printf("\n %f",perimeter);
}
```

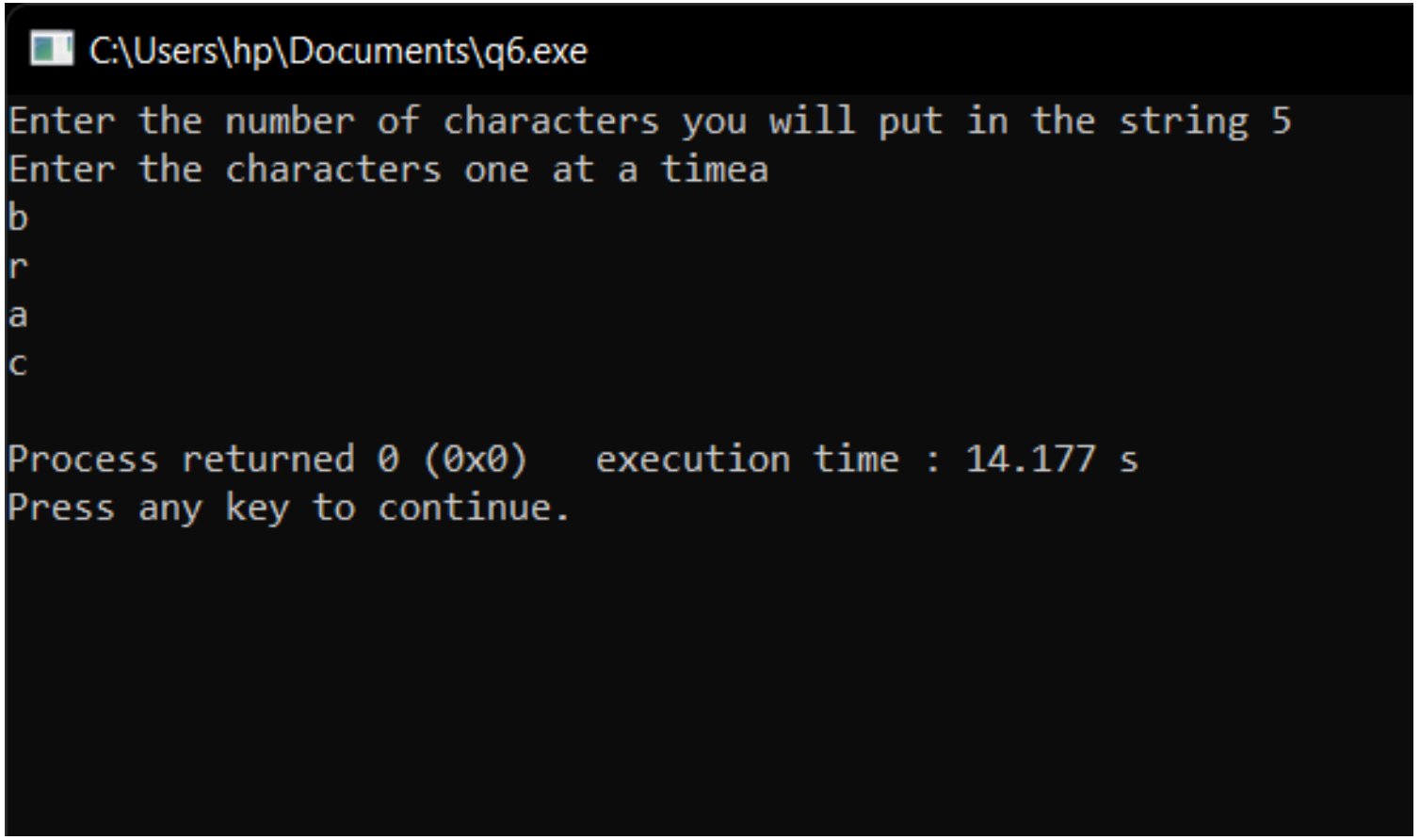
Q5 PART 2 OUTPUT



Q6-abrakadabra

```
#include<stdio.h>
main()
{
int n;
char a[2500];
char g[]={'a','b','r','a','k','a','d','a','b','r','a','\0'};
printf("Enter the number of characters you will put in
the string ");
scanf("%d",&n);
int i,j=0;
printf("Enter the characters one at a time");
for(i=0;i<n;i++)
 {
scanf("%s",&a[i]);
 if(a[i]==g[j])
 {
 j++;
 }
 else
 break;
}}
```

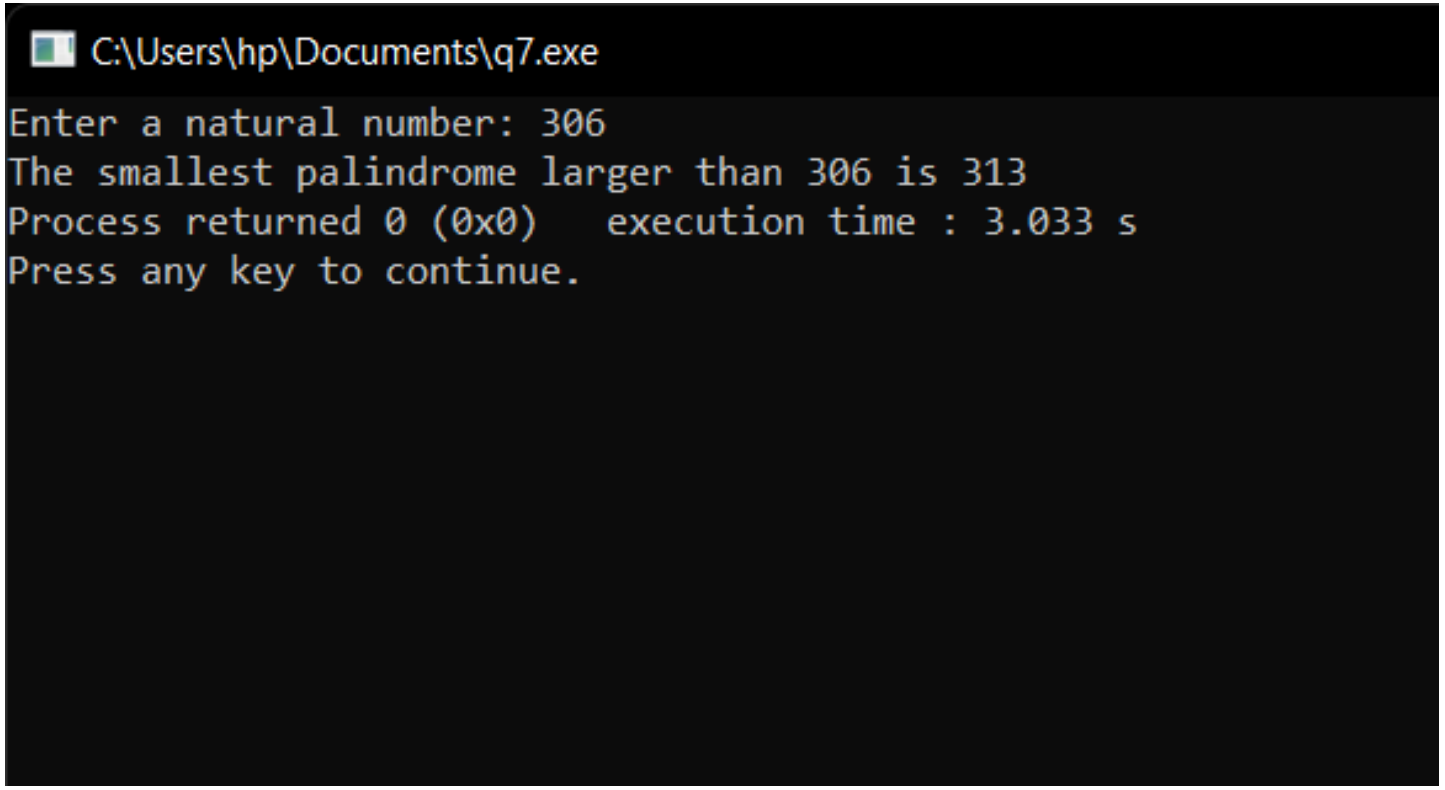
Q-6 output


C:\Users\hp\Documents\q6.exe
Enter the number of characters you will put in the string 5
Enter the characters one at a timea
b
r
a
c
Process returned 0 (0x0)   execution time : 14.177 s
Press any key to continue.

Q-7 palidrome

```
#include <stdio.h>
int main()
{
int n;
printf("Enter a natural number: ");
scanf("%d", &n);
int a = 1, b, c, d, e;
b=n;
c=n;
while (a!= 0)
{
n = ++b;
e = d = 0;
while (n > 0)
{
d = n % 10;
e = e * 10 + d;
n =n/10;
}
if (e == b)
{
a = 0;
printf("The smallest palindrome larger than %d is %d", c, b);
}
}
return 0;
}
```

Q- 7 output


C:\Users\hp\Documents\q7.exe
Enter a natural number: 306
The smallest palindrome larger than 306 is 313
Process returned 0 (0x0)   execution time : 3.033 s
Press any key to continue.