

Finding stu result using array:

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 1 Col 71 Insert Indent Tab Fill Unindent * E:6PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int id, sub[6],tot=0,i,p=1;
char name[20];
float avg;
clrscr();
printf("Enter stu id, name ");
scanf("%d %s",&id,name);
printf("Enter 6 sub marks ");
for(i=0;i<6;i++)
{ scanf("%d",&sub[i]);tot+=sub[i];if(sub[i]<35)p=0;}
avg=tot/6.0;
printf("%s tot=%d, avg=%.2f and got %s",name,tot,avg,p?"Pass":"Fail");
getch();
}

TC
Enter stu id, name 1 krish
Enter 6 sub marks 99 90 98 89 89 99
krish tot=564, avg=94.00 and got Pass_
```

```
TC
Enter stu id, name 2 bablu
Enter 6 sub marks 45 40 30 43 35 37
bablu tot=230, avg=38.33 and got Fail_
```

BOARD OF SECONDARY EDUCATION ANDHRA PRADESH																							
ROLLNO: AAA DOB: AAA FATHER: AAAAA SCHOOL: ZPPH SCHOOL, PONNUR, GUNTUR DIST.	NAME: AAAAAA GENDER: M MOTHER: AAAAA																						
IDENTIFICATION MARKS: A MOLE ON THE RIGHT HAND A MOLE ON THE RIGHT FOOT																							
<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 40%; text-align: left; color: blue;">SUBJECT</th> <th style="width: 40%; text-align: left; color: blue;">MARKS</th> <th style="width: 20%; text-align: left; color: blue;">PASS/FAIL</th> </tr> <tr> <td>TELUGU</td> <td>89</td> <td>P</td> </tr> <tr> <td>ENGLISH</td> <td>25</td> <td>F</td> </tr> <tr> <td>HINDI</td> <td>75</td> <td>P</td> </tr> <tr> <td>MATHS</td> <td>99</td> <td>P</td> </tr> <tr> <td>SCIENCE</td> <td>0</td> <td>F</td> </tr> <tr> <td>SOCIAL</td> <td>89</td> <td>P</td> </tr> </table>			SUBJECT	MARKS	PASS/FAIL	TELUGU	89	P	ENGLISH	25	F	HINDI	75	P	MATHS	99	P	SCIENCE	0	F	SOCIAL	89	P
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KUMAR TOT=AAA AVG=AAA GOT FAILED																							

```
#include<stdio.h>

#include<conio.h>

void main()

{

int rollno, sub[6],tot=0,i,p=1;

char name[20], dob[20], gender[10],father[20],mother[20],school[30],

id1[30], id2[30], subject[6][10]={"Tel","Eng","Hin","Mat","Sci","Soc"};

float avg;
```

```

clrscr();

printf("Enter stu Roll no ");scanf("%d",&rollno);

flushall();printf("Enter stu name "); gets(name);

printf("Enter date of birth "); gets(dob);

printf("Enter gender "); gets(gender);

printf("Enter father name "); gets(father);

printf("Enter mother name "); gets(mother);

printf("Enter school name "); gets(school);

printf("Enter identification mark1 "); gets(id1);

printf("Enter identification mark2 "); gets(id2);

printf("Enter 6 sub marks ");

for(i=0;i<6;i++)

{ scanf("%d",&sub[i]);tot+=sub[i];if(sub[i]<35)p=0;}

avg=tot/6.0;

puts("-----");

puts("\t\t\t BOARD OF SECONDARY EDUCATION ");

puts("\t\t\t ANDHRA  PRADESH");

puts("-----");

printf("Rollno: %d\t Name: %s\n",rollno,name);

printf("DOB: %s\t Gender: %s\n",dob,gender);

printf("Father: %s\t Mother: %s\n",father,mother);

printf("School: %s\n",school);

puts("-----");

puts("Identification Marks");

puts("-----");

```

```

printf("Identification Mark1: %s\n",id1);

printf("Identification Mark2: %s\n",id2);

puts("-----");

puts("Subject\tMarks\tPass/Fail");

puts("-----");

for(i=0;i<6;i++)

printf("%s\t%d\t%s\n",subject[i],sub[i],sub[i]>=35?"P":"F");

puts("-----");

printf("%s tot=%d, avg=%.2f and got ",name,tot,avg);

if(p==0)puts("Failed");

else if(avg>=75)puts("Distinction");

else if(avg>=60)puts("First Class");

else if(avg>=50)puts("Second Class");

else puts("Third Class");

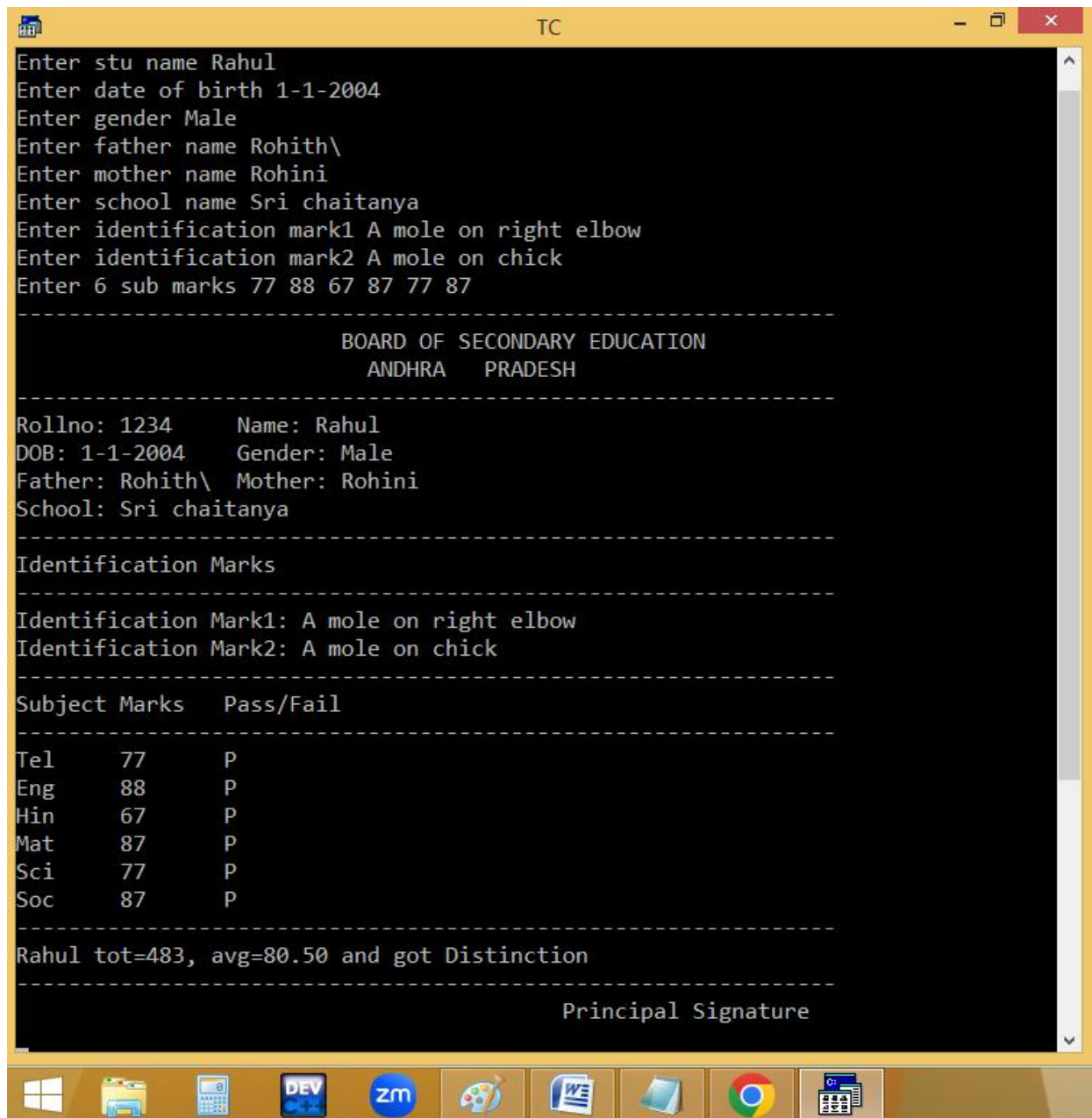
puts("-----");

puts("\t\t\t\t\t Principal Signature ");

getch();

}

```



```
TC
Enter stu Roll no 1001
Enter stu name John Wick
Enter date of birth 10-mar-2005
Enter gender Male
Enter father name Suresh Paul
Enter mother name Lisa mary
Enter school name Don Bosco school
Enter identification mark1 A mole on right chick
Enter identification mark2 A mole on fore head
Enter 6 sub marks 45 30 54 25 76 59
-----
                          BOARD OF SECONDARY EDUCATION
                          ANDHRA    PRADESH
-----
Rollno: 1001      Name: John Wick
DOB: 10-mar-2005   Gender: Male
Father: Suresh Paul   Mother: Lisa mary
School: Don Bosco school
-----
Identification Marks
-----
Identification Mark1: A mole on right chick
Identification Mark2: A mole on fore head
-----
Subject Marks      Pass/Fail
-----
Tel      45      P
Eng      30      F
Hin      54      P
Mat      25      F
Sci      76      P
Soc      59      P
-----
John Wick tot=289, avg=48.17 and got Failed
-----
Principal Signature
```

Read n elements in to array and find the max, min elements:

The image shows a screenshot of the Turbo C++ (TC) IDE. The top window displays the source code for a C program named E:6PM.C. The code is as follows:

```
File Edit Run Compile Project Options Debug Break/watch
Line 15 Col 36 Insert Indent Tab Fill Unindent * E:6PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a[100],n,i,max=-32768, min=32767;
clrscr();
printf("Enter array size 1-100 "); scanf("%d",&n);
printf("Enter %d elements ", n);
for(i=0; i<n;i++)
{
scanf("%d",&a[i]);
if(min>a[i])min=a[i];
if(max<a[i])max=a[i];
}
printf("Min=%d, Max=%d", min, max);
getch();
}
```

The bottom window shows the program's execution. It prompts the user to enter the array size and elements. The user has entered 9 for the size and the following 9 elements: 7, 0, 4, -5, 23, -12, 75, 13, 123. The program has calculated and displayed the minimum value as -12 and the maximum value as 123.

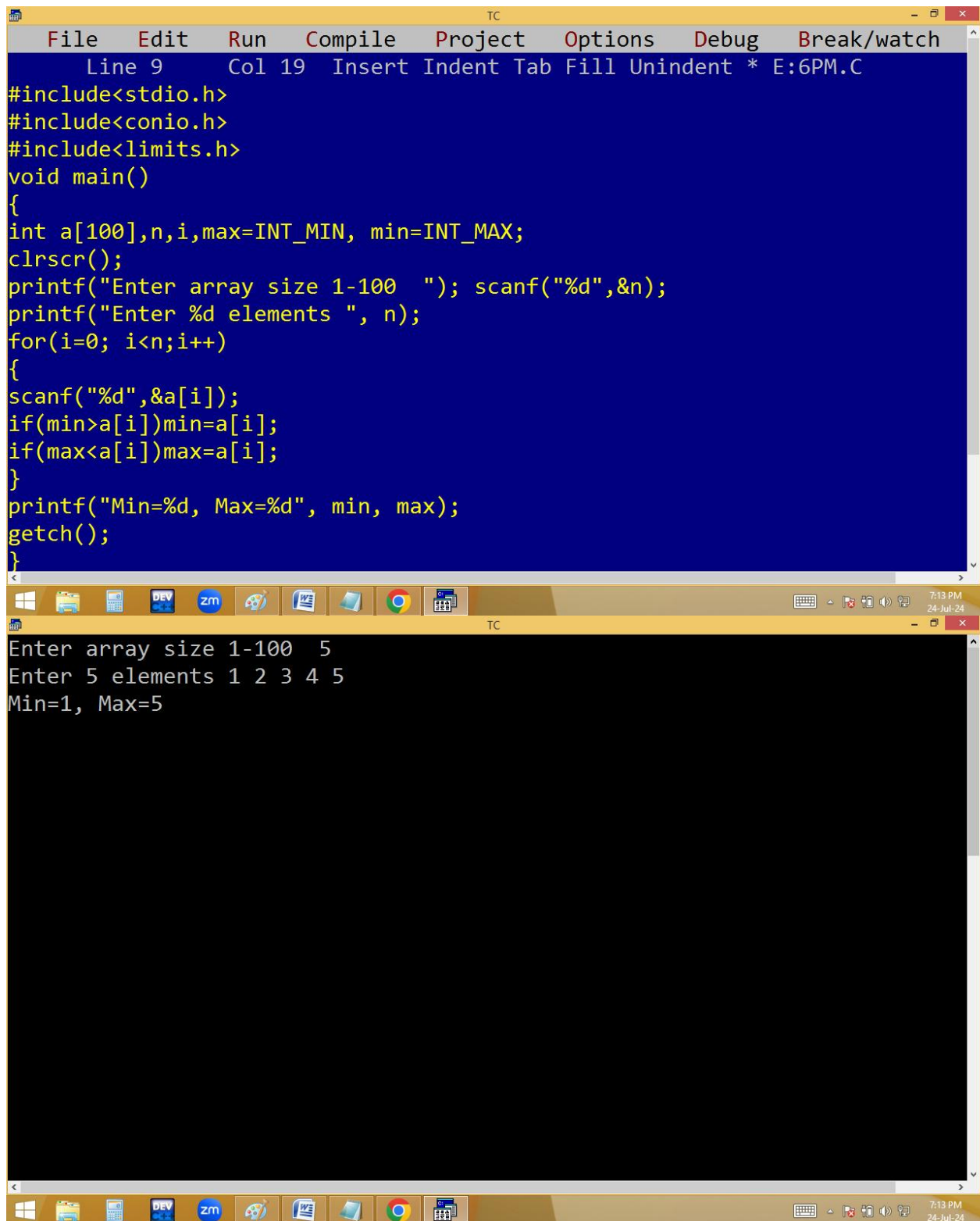
```
Enter array size 1-100 9
Enter 9 elements 7 0 4 -5 23 -12 75 13 123
Min=-12, Max=123
```

```

for(i=0;i<6;i++)
{
scanf("%d",&a[i]);
if(min>a[i])min=a[i];
if(max<a[i])max=a[i];
}
p(min, max);

```

a	9	5	-3	22	1	-10
	0	1	2	3	4	5
i	min > a[i]			max < a[i]		
0	32767 > 9			-32768 < 9		
1	9 > 5			9 < 5		
2	5 > -3			9 < -3		
3	-3 > 22			9 < 22		
4	-3 > 1			22 < 1		
5	-3 > -10			22 < -10		



The image shows a screenshot of the Turbo C++ (TC) IDE. The top window displays the source code for a C program. The code includes headers for `stdio.h`, `conio.h`, and `limits.h`. It defines a `main` function that declares an array `a` of size 100, and variables `n`, `i`, `max`, and `min`. `max` is initialized to `INT_MIN` and `min` to `INT_MAX`. The program prompts the user to enter the array size (1-100) and the number of elements (`n`). It then uses a `for` loop to read `n` elements into the array `a`. Inside the loop, it compares each element with the current `min` and `max` values, updating them if necessary. Finally, it prints the minimum and maximum values and waits for a key press using `getch()`.

```
File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 19 Insert Indent Tab Fill Unindent * E:6PM.C
#include<stdio.h>
#include<conio.h>
#include<limits.h>
void main()
{
int a[100],n,i,max=INT_MIN, min=INT_MAX;
clrscr();
printf("Enter array size 1-100 "); scanf("%d",&n);
printf("Enter %d elements ", n);
for(i=0; i<n;i++)
{
scanf("%d",&a[i]);
if(min>a[i])min=a[i];
if(max<a[i])max=a[i];
}
printf("Min=%d, Max=%d", min, max);
getch();
}
```

The bottom window shows the program's execution. It displays the prompts and user input: "Enter array size 1-100 5" and "Enter 5 elements 1 2 3 4 5". The output shows "Min=1, Max=5".

```
Enter array size 1-100 5
Enter 5 elements 1 2 3 4 5
Min=1, Max=5
```

```

for(i=0;i<6;i++)
{
scanf("%d",&a[i]);
if(min>a[i])min=a[i];
if(max<a[i])max=a[i];
}
p(min, max);

```

a	9	5	-3	22	1	-10
	0	1	2	3	4	5
i	min > a[i]			max < a[i]		
0	32767	>	9	-32768	<	9
1	32767	>	5	9	<	5
2	5	>	-3	9	<	-3
3	-3	>	22	9	<	22
4	-3	>	1	22	<	1
5	-3	>	-10	22	<	-10

In other compilers:

```

#include<stdio.h>

#include<conio.h>

#include<limits.h>

main()

{

int a[100],n,i,max=INT_MIN, min=INT_MAX;

/*

printf("Enter array size 1-100 "); scanf("%d",&n);

printf("Enter %d elements ", n);

for(i=0; i<n;i++)

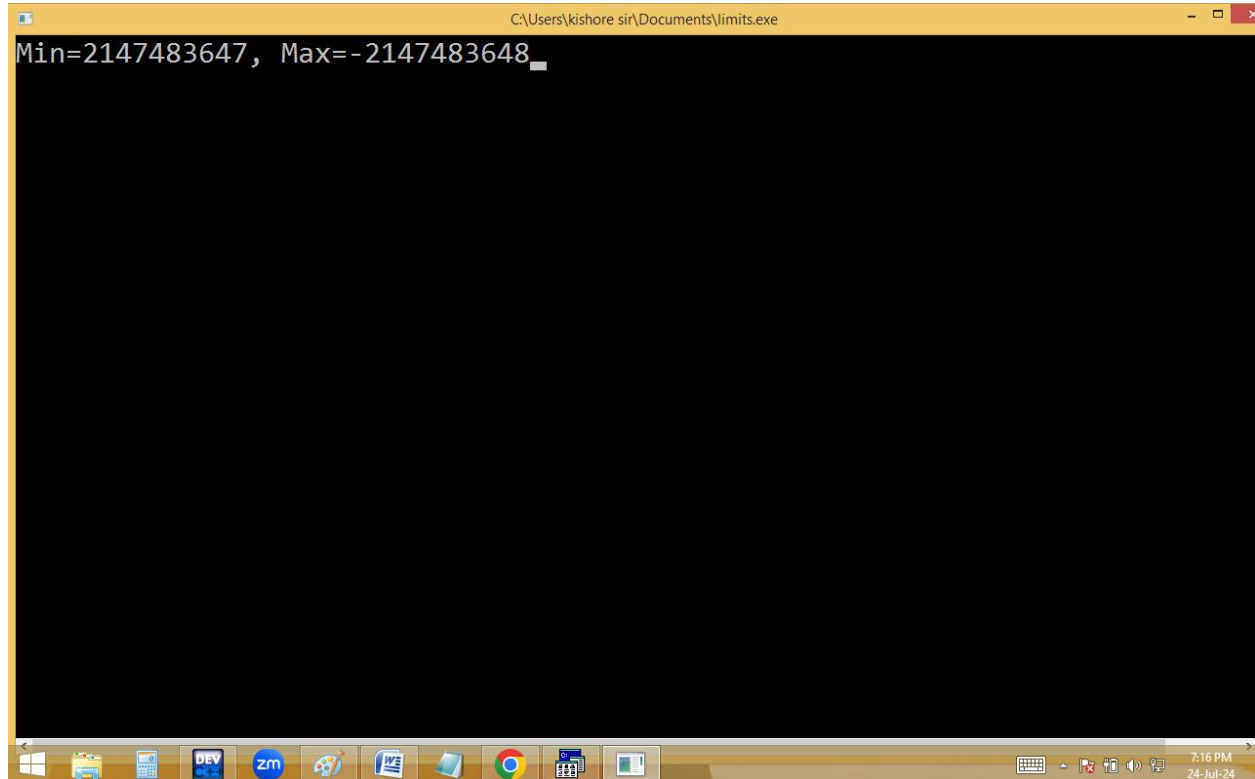
{

scanf("%d",&a[i]);

if(min>a[i])min=a[i];

```

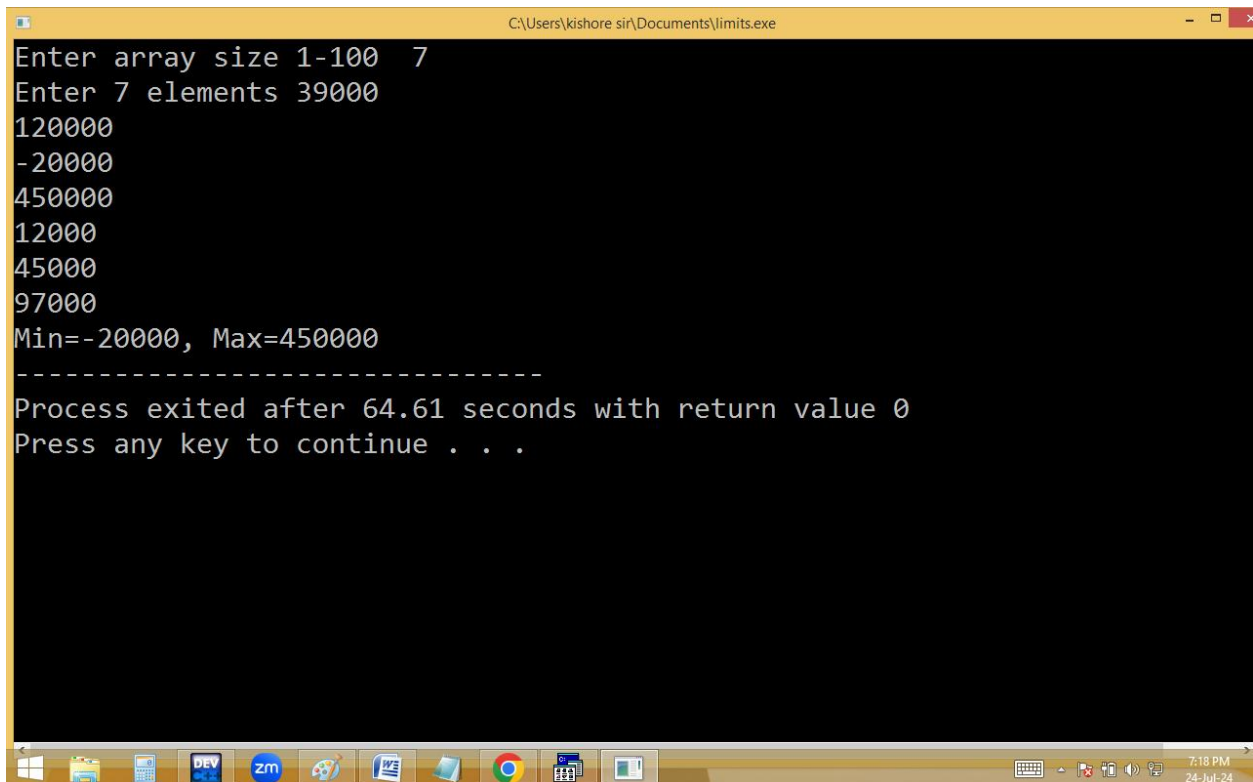
```
if(max<a[i])max=a[i];  
}*/  
printf("Min=%d, Max=%d", min, max);  
getch();  
}
```



```
Min=2147483647, Max=-2147483648_
```

```
#include<stdio.h>  
#include<conio.h>  
#include<limits.h>  
main()  
{  
int a[100],n,i,max=INT_MIN, min=INT_MAX;  
printf("Enter array size 1-100 "); scanf("%d",&n);  
printf("Enter %d elements ", n);
```

```
for(i=0; i<n;i++)  
{  
scanf("%d",&a[i]);  
if(min>a[i])min=a[i];  
if(max<a[i])max=a[i];  
}  
printf("Min=%d, Max=%d", min, max);  
getch();  
}
```



```
C:\Users\kishore sir\Documents\limits.exe  
Enter array size 1-100 7  
Enter 7 elements 39000  
120000  
-20000  
450000  
12000  
45000  
97000  
Min=-20000, Max=450000  
-----  
Process exited after 64.61 seconds with return value 0  
Press any key to continue . . .
```

Finding prime/composite no's :

```
TC
Line 19 Col 21 Insert Indent Tab Fill Unindent * E:6PM.C
#include<stdio.h> #include<conio.h>
void main()
{
int a[100],n,i,j,c; clrscr();
printf("Enter array size 1-100 "); scanf("%d",&n);
printf("Enter %d elements ", n);for(i=0; i<n;i++)scanf("%d",&a[i]);
for(i=0;i<n;i++)
{
for(c=0,j=1;j<=a[i];j++)
{
if(a[i]==1) {printf("%d is not a prime/composite\n",a[i]);goto last;}
if(a[i]%j==0)c++;
}
printf("%d is ", a[i]);
puts(c==2?"Prime":"Composite");
last: ;
}
getch();
}

TC
Enter array size 1-100 5
Enter 5 elements 1 2 3 4 5
1 is not a prime/composite
2 is Prime
3 is Prime
4 is Composite
5 is Prime
```

9	5	3	22	7	10
---	---	---	----	---	----

i 0 1 2 3 4 5

$\begin{array}{c} i \\ \hline a[0] \end{array}$

9 % 1 = 0
3 = 0
9 = 0

$\begin{array}{c} j \\ \hline \end{array}$

$\begin{array}{c} i \\ \hline a[1] \end{array}$

5 % 1 = 0
5 % 5 = 0

$\begin{array}{c} j \\ \hline \end{array}$

Home work:

Decimal to binary conversion

Eg: 20 → 0000 0000 0001 0100