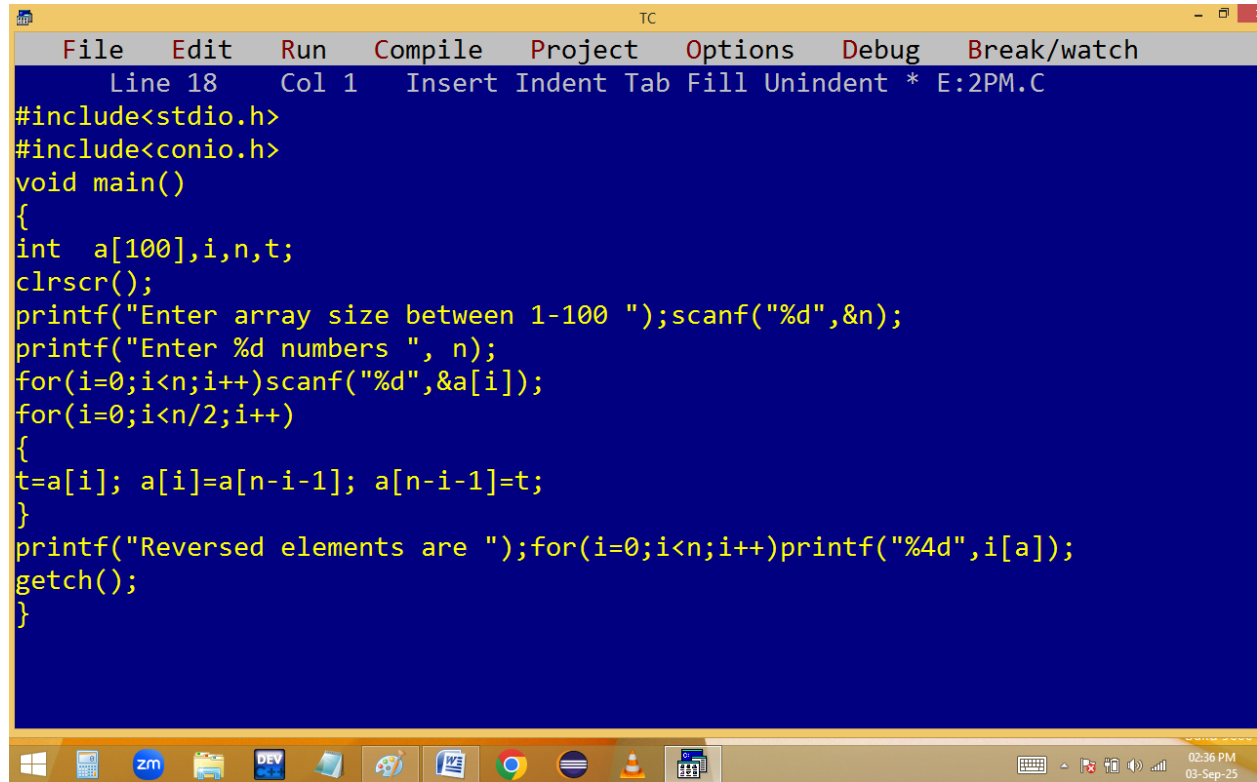


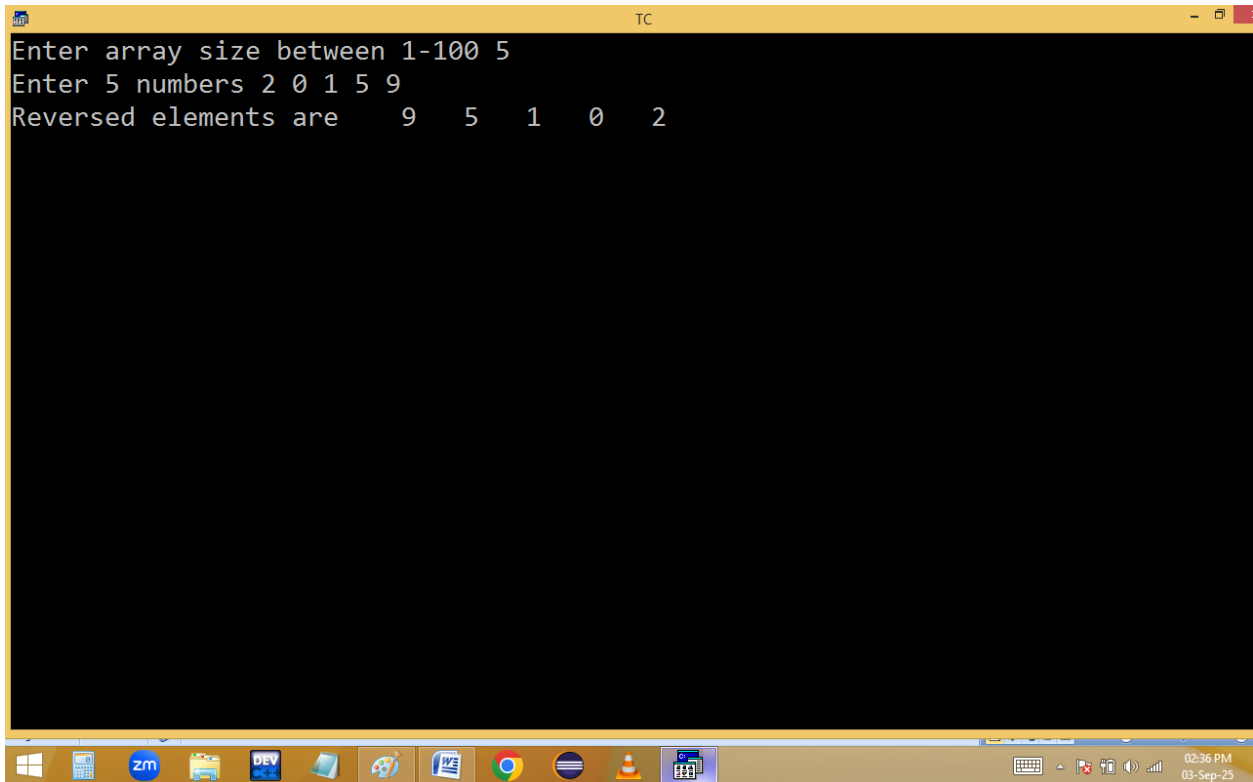
Arrange array elements in reverse order permanently.



The image shows a screenshot of a Turbo C++ (TC) IDE window. The title bar reads "TC". The menu bar includes "File", "Edit", "Run", "Compile", "Project", "Options", "Debug", and "Break/watch". The status bar at the top indicates "Line 18", "Col 1", and "Insert Indent Tab Fill Unindent \* E:2PM.C". The main editing area has a blue background and contains the following C code:

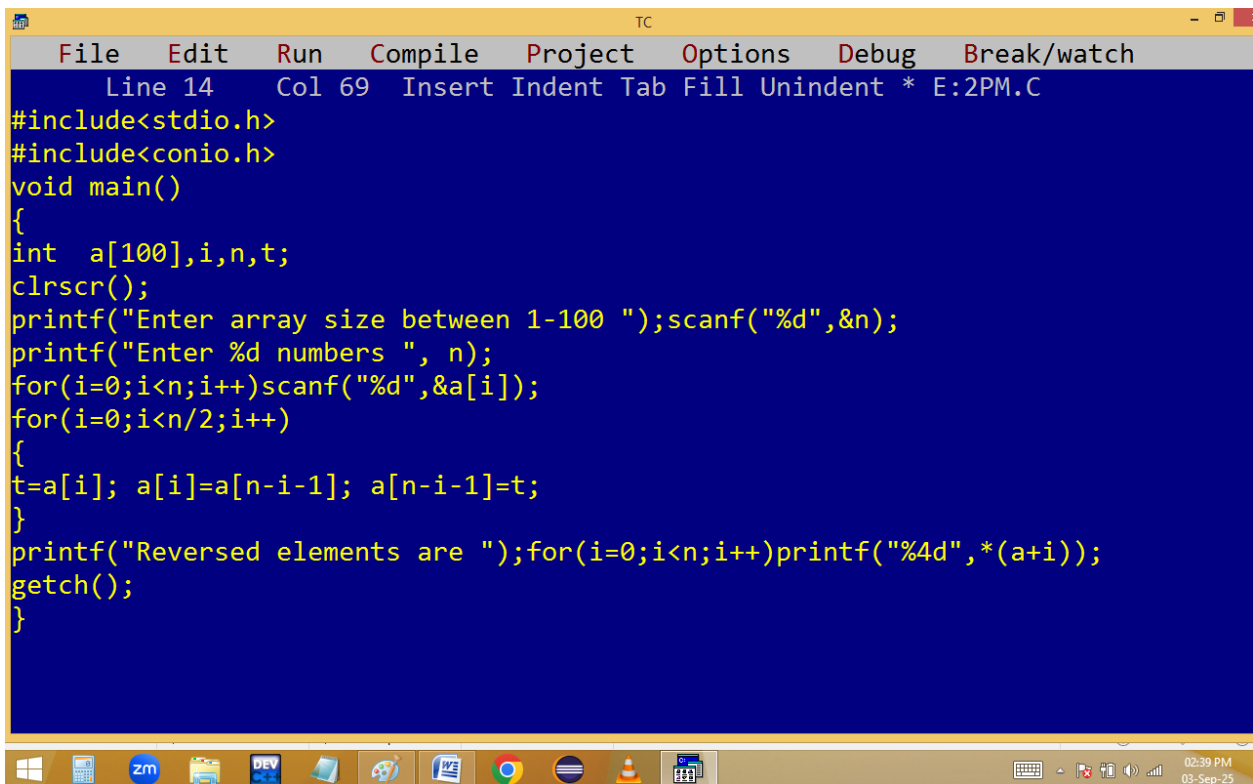
```
#include<stdio.h>
#include<conio.h>
void main()
{
int  a[100],i,n,t;
clrscr();
printf("Enter array size between 1-100 ");scanf("%d",&n);
printf("Enter %d numbers ", n);
for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=0;i<n/2;i++)
{
t=a[i]; a[i]=a[n-i-1]; a[n-i-1]=t;
}
printf("Reversed elements are ");for(i=0;i<n;i++)printf("%4d",i[a]);
getch();
}
```

The Windows taskbar is visible at the bottom, showing icons for Windows, ZM, DEV, and other applications. The system clock in the bottom right corner shows "02:36 PM" and "03-Sep-25".



The screenshot shows a Turbo C++ (TC) console window with a black background and white text. The program prompts the user to enter an array size between 1 and 100, and then to enter 5 numbers. The user has entered 5, and the numbers 2, 0, 1, 5, and 9. The program then displays the reversed elements: 9, 5, 1, 0, and 2. The window title is "TC". The taskbar at the bottom shows various icons including Windows, ZM, DEV, and others, along with the system clock showing 02:36 PM on 03-Sep-25.

```
Enter array size between 1-100 5
Enter 5 numbers 2 0 1 5 9
Reversed elements are    9    5    1    0    2
```



The screenshot shows a Turbo C++ (TC) editor window with a blue background and yellow text. The window title is "TC". The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar shows "Line 14 Col 69 Insert Indent Tab Fill Unindent \* E:2PM.C". The source code is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int  a[100],i,n,t;
clrscr();
printf("Enter array size between 1-100 ");scanf("%d",&n);
printf("Enter %d numbers ", n);
for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=0;i<n/2;i++)
{
t=a[i]; a[i]=a[n-i-1]; a[n-i-1]=t;
}
printf("Reversed elements are ");for(i=0;i<n;i++)printf("%4d",*(a+i));
getch();
}
```

The taskbar at the bottom shows various icons including Windows, ZM, DEV, and others, along with the system clock showing 02:39 PM on 03-Sep-25.

```

Enter array size between 1-100 4
Enter 4 numbers 1 2 3 4
Reversed elements are 4 3 2 1_

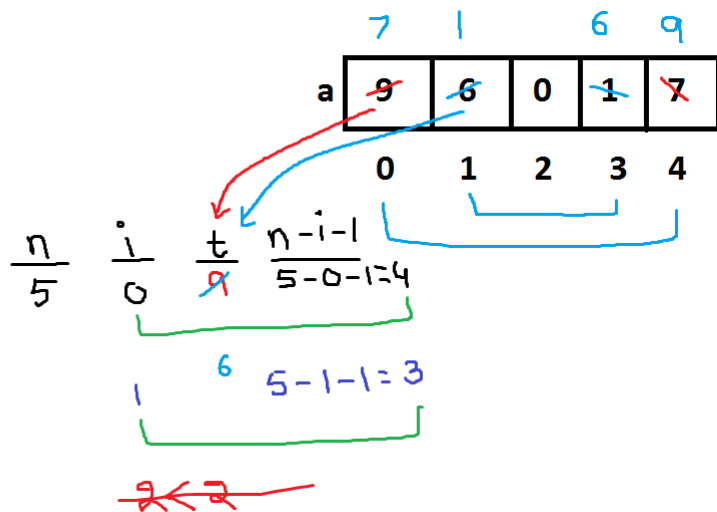
```

for(i=0;i<n/2;i++)

```

{
  t=a[i];
  a[i]=a[n-i-1];
  a[n-i-1]=t;
}

```





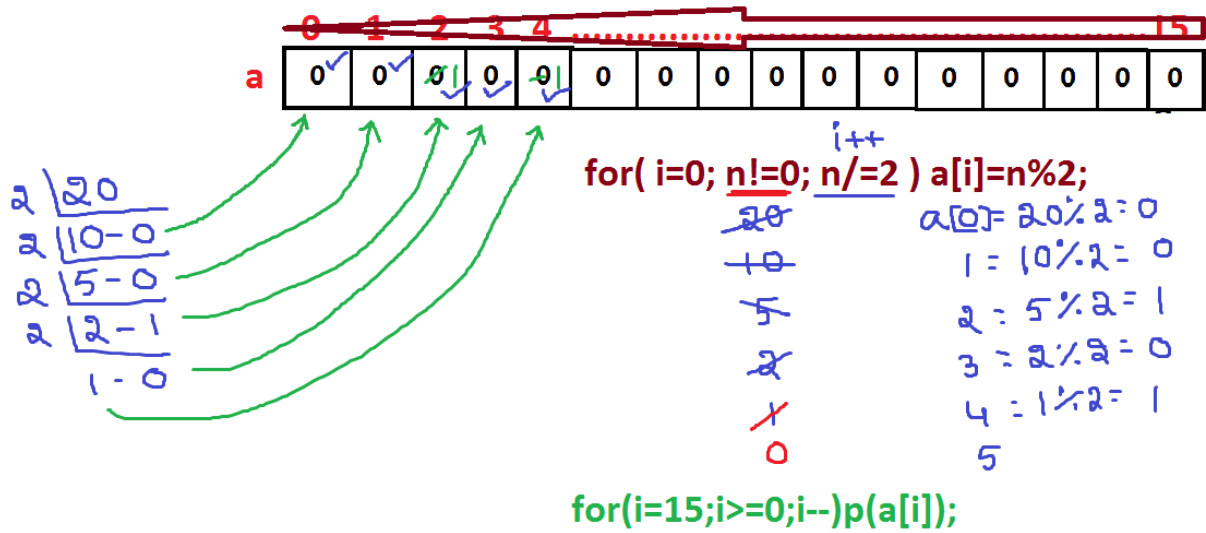
## 1. Decimal to binary conversion

Eg: **20 ==> 0000 0000 0001 0100**

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 10 Col 30 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
    int n,i,a[16]={0};
    clrscr();
    printf("Enter the no "); scanf("%d",&n);
    for(i=0;n!=0;i++,n/=2)a[i]=n%2; /* dec to binary */
    printf("Binary code ");
    for(i=15;i>=0;i--)printf("%2d_",a[i]);
    getch();
}
```

```
TC
Enter the no 20
Binary code 0 0 0 0 0 0 0 0 0 0 0 1 0 1 0 0
```

```
TC
Enter the no 3
Binary code 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1_
```



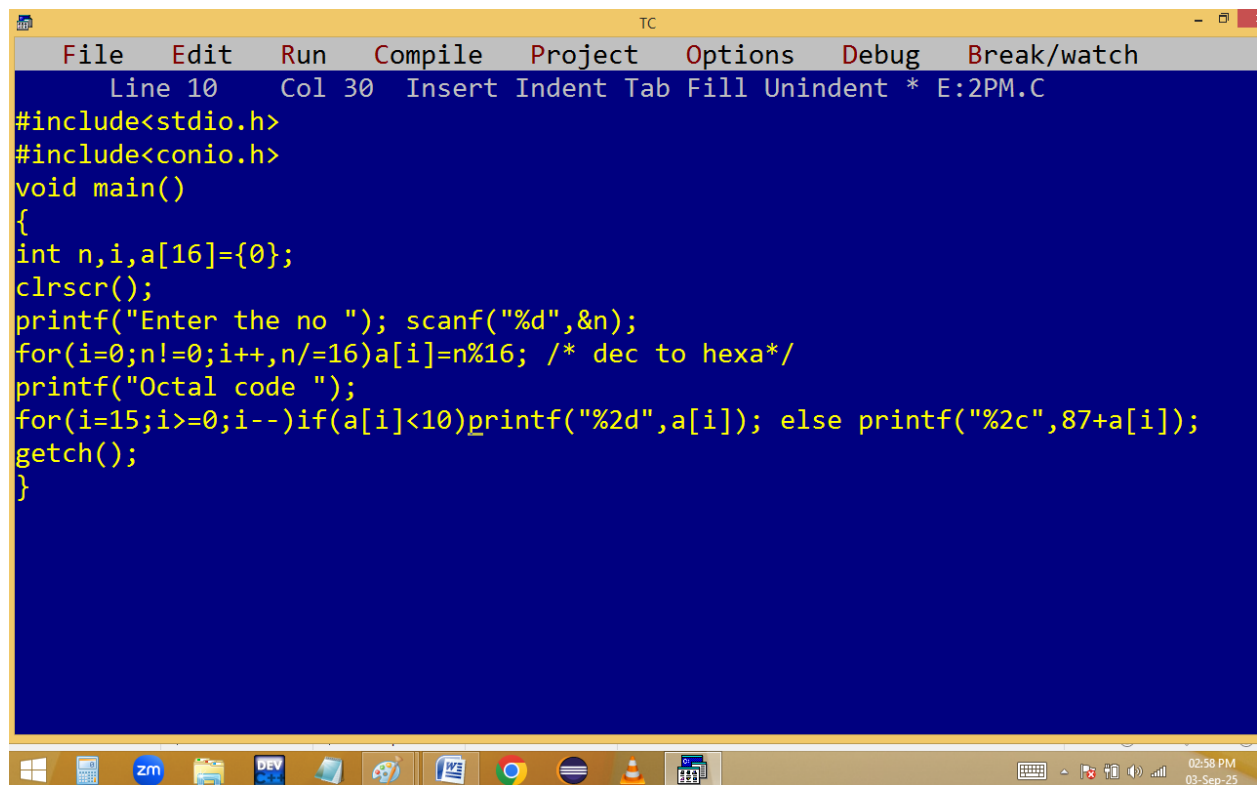
**decimal to octal:**

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 8 Col 48 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n,i,a[16]={0};
clrscr();
printf("Enter the no "); scanf("%d",&n);
for(i=0;n!=0;i++,n/=8)a[i]=n%8; /* dec to Octal */
printf("Octal code ");
for(i=15;i>=0;i--)printf("%2d",a[i]);
getch();
}
```

```
TC
Enter the no 20
Octal code  0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 4
```

$$\begin{array}{r} 8 \overline{) 20} \\ 2-4 \checkmark \end{array}$$

## Decimal to hexa:



```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 10 Col 30 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n,i,a[16]={0};
clrscr();
printf("Enter the no "); scanf("%d",&n);
for(i=0;n!=0;i++,n/=16)a[i]=n%16; /* dec to hexa*/
printf("Octal code ");
for(i=15;i>=0;i--)if(a[i]<10)printf("%2d",a[i]); else printf("%2c",87+a[i]);
getch();
}
```



```
TC
Enter the no 95
Octal code 0 0 0 0 0 0 0 0 0 0 0 0 0 0 5 f_
```

```
TC
Enter the no 45
Octal code 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 d
```

```
TC
Enter the no 20
Octal code 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 4_
```

$$\begin{array}{r} 16 \overline{) 45} \\ 2-13 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 16 \overline{) 20} \\ 1-4 \checkmark \end{array}$$

$$\begin{array}{r} 16 \overline{) 95} \\ 5-15 \\ \hline f \end{array}$$

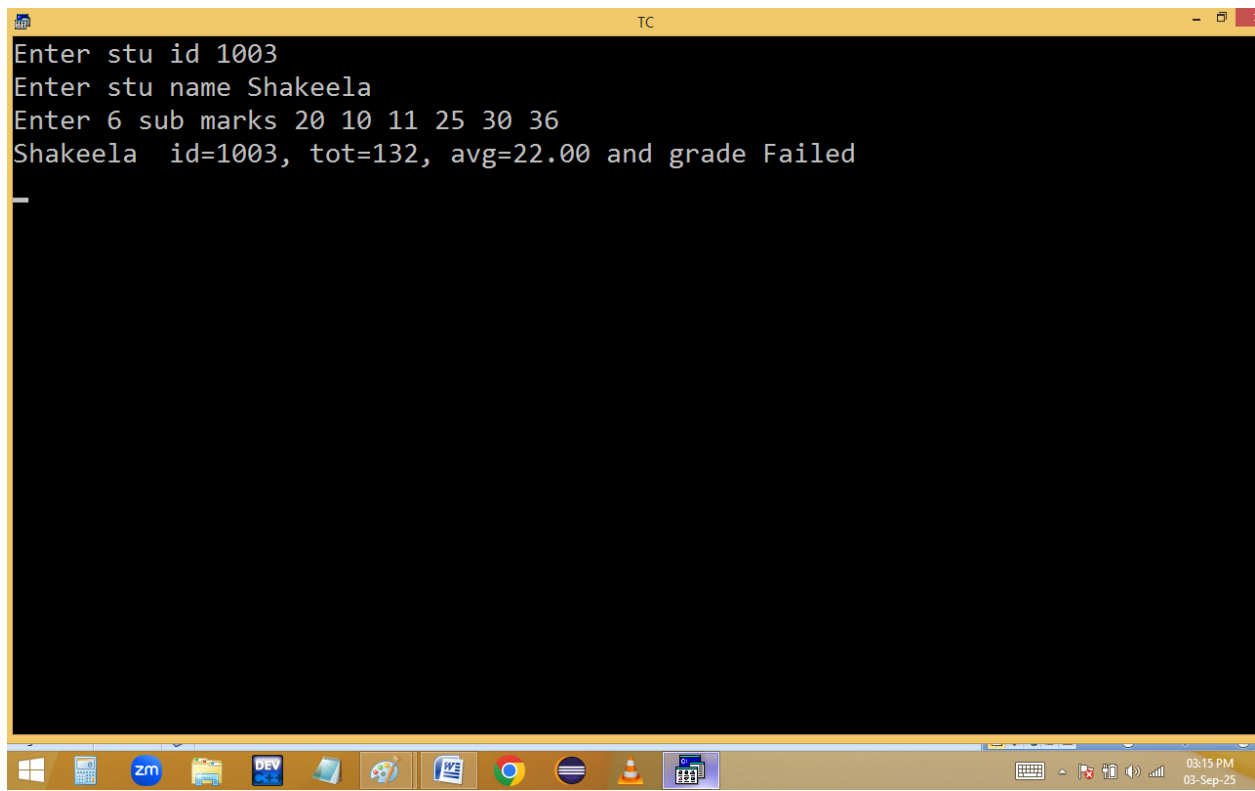
**Read a stu id, name, 6 sub marks using array. Find total, average and grade using below table.**

<b>Avg</b>	<b>Grade</b>
<b>&gt;=80</b>	<b>Distinction</b>
<b>&gt;=60</b>	<b>1<sup>st</sup> class</b>
<b>&gt;=50</b>	<b>2<sup>nd</sup> class</b>
<b>&gt;=35</b>	<b>3<sup>rd</sup> class</b>
<b>&lt;35</b>	<b>Fail</b>

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 4 Col 47 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{int id,sub[6],tot=0, i,pass=1;char name[30];float avg;
clrscr();
printf("Enter stu id "); scanf("%d",&id);
flushall();
printf("Enter stu name "); gets(name);
printf("Enter 6 sub marks ");
for(i=0;i<6;i++){scanf("%d",&sub[i]);tot+=sub[i];if(sub[i]<35)pass=0;}
avg=tot/6.0;
printf("%s id=%d, tot=%d, avg=%.2f and grade ",name,id,tot,avg);
if(pass==0)puts("Failed");
else if(avg>=80)puts("Distinction");
else if(avg>=70)puts("1st Class");
else if(avg>=60)puts("2nd Class");
else puts("3rd Class");
getch();
}
```

```
TC
Enter stu id 1001 Kishore Naidu
Enter stu name Kishore Naidu
Enter 6 sub marks 99 89 90 88 90 88
Kishore Naidu id=1001, tot=544, avg=90.67 and grade Distinction
```

```
TC
Enter stu id 1002
Enter stu name bablu
Enter 6 sub marks 45 50 35 41 36 44
bablu id=1002, tot=251, avg=41.83 and grade 3rd Class
```



```
Enter stu id 1003
Enter stu name Shakeela
Enter 6 sub marks 20 10 11 25 30 36
Shakeela id=1003, tot=132, avg=22.00 and grade Failed
```

The screenshot shows a Windows 10 desktop environment. A terminal window titled 'TC' is open, displaying the execution of a C program. The program prompts the user to enter a student ID, name, and six subject marks. The user has entered '1003' for the ID, 'Shakeela' for the name, and '20 10 11 25 30 36' for the marks. The program has calculated the total marks as 132, the average as 22.00, and determined the grade as 'Failed'. The Windows taskbar at the bottom shows various application icons including Windows Explorer, Zoho Mail, DEV, Paint, Word, Chrome, Firefox, VLC, and a calculator. The system clock in the bottom right corner indicates the time is 03:15 PM on 03-Sep-25.

**Linear search:**

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 8 Col 60 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a[100],n,i,e,f=0;
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]);
printf("Enter search element "); scanf("%d",&e);
for(i=0;i<n;i++)
{
if(a[i]==e)printf("%d in %d cell\n",e,i+1,f=1);
}
if(f==0)printf("%d not found",e);
getch();
}
```

```
TC
Enter array size 1-100 10
Enter 10 elements 2 0 1 7 3 2 8 2 6 4
Enter search element 2
2 in 1 cell
2 in 6 cell
2 in 8 cell
```

```
TC
Enter array size 1-100 5
Enter 5 elements 1 2 3 4 5
Enter search element 9
9 not found_
```

```
for( i=0; i<5;i++ )
```

```
{
  if(a[i]==e)
```

```
{ 10 3
```

```
  p("%d in %d cell\n",e,i+1,f=1);
```

```
}
```

```
}
```

```
if(f==0)p("ele not found");
```

$\frac{n}{5}$      $\frac{e}{10}$      $\frac{i}{0}$      $\frac{f}{0}$

1  
2+1=3

20

a

2	7	10	4	1
0	1	2	3	4

## Selection sort:

2	7	1	4	3
<u>1</u>	7	2	4	3
1	<u>2</u>	7	4	3
1	2	<u>4</u>	7	3
1	2	3	<u>7</u>	4
1	2	3	4	<u>7</u>

L	R
<u>i</u>	<u>j</u>
0	1, 2, 3, 4
1	2, 3, 4
2	3, 4
3	4

