

Read a baby age in no of days and find the baby age in years, months, weeks and days.

$$y = 500 / 365 = 1$$

$$m = 500 \% 365 = 135 / 30 = 4$$

$$w = 500 \% 365 = 135 \% 30 = 15 / 7 = 2$$

$$d = 500 \% 365 = 135 \% 30 = 15 \% 7 = 1$$

t days

$$\begin{array}{r} 365 \overline{) 500} (1-y \\ \underline{365} \\ 30 \overline{) 135} (4-m \\ \underline{120} \\ 7 \overline{) 15} (2-w \\ \underline{14} \\ 1-d \end{array}$$

The image shows two screenshots of the Turbo C++ (TC) IDE. The top screenshot displays the source code of a C program. The bottom screenshot shows the program's execution output.

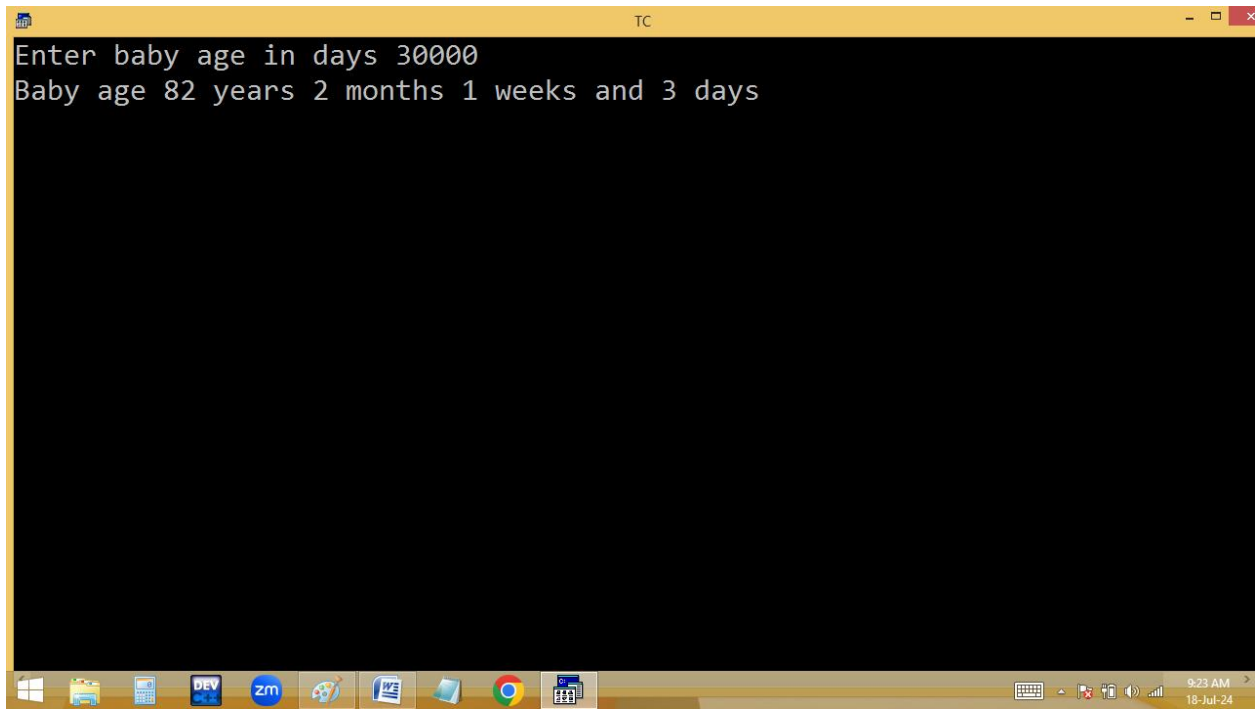
Top Screenshot: Source Code

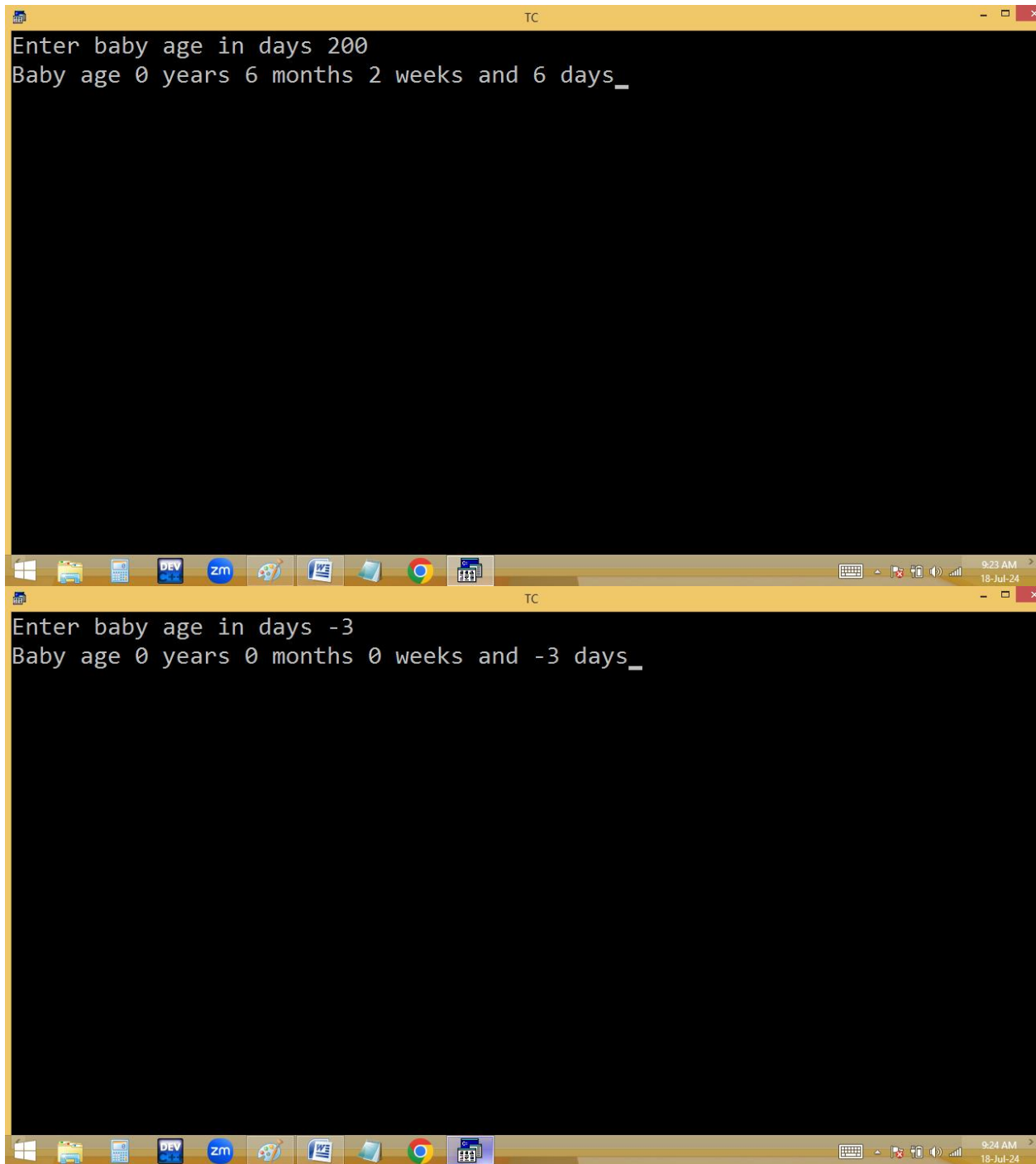
```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 12 Col 68 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int tdays,y,m,w,d;
clrscr();
printf("Enter baby age in days "); scanf("%d",&tdays);
y=tdays/365;
m=tdays%365/30;
w=tdays%365%30/7;
d=tdays%365%30%7;
printf("Baby age %d years %d months %d weeks and %d days",y,m,w,d);
getch();
}
```

Bottom Screenshot: Execution Output

```
TC
Enter baby age in days 500
Baby age 1 years 4 months 2 weeks and 1 days
```

The bottom screenshot shows the program's output after execution. The user entered 500 days, and the program calculated the age as 1 year, 4 months, 2 weeks, and 1 day.

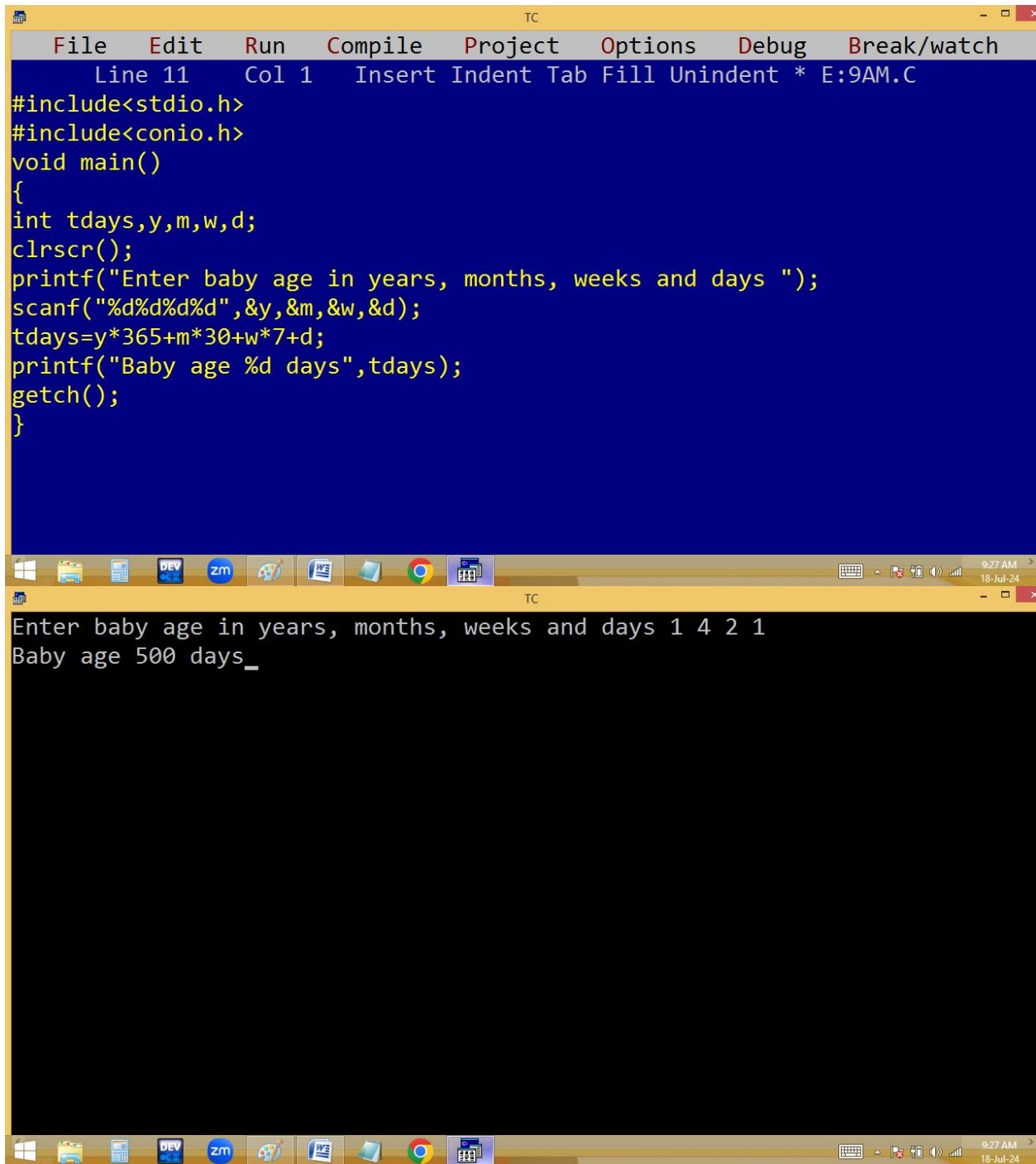




Read baby age in years, months, weeks and days and find the baby age in total days.

1 year + 4 months + 2 weeks + 1 day = 500 days

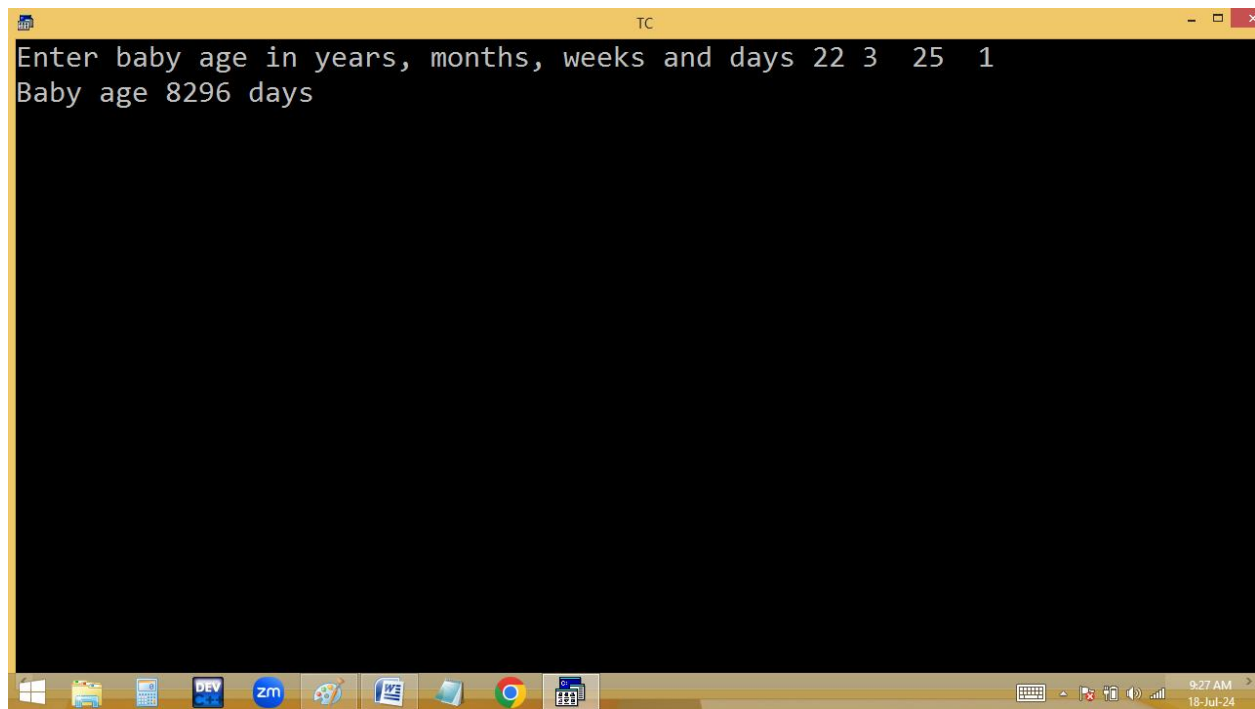
$1 \times 365 + 4 \times 30 + 2 \times 7 + 1 = 500$ days



The image shows two screenshots of the Turbo C++ (TC) IDE. The top screenshot displays the source code for a program that calculates a baby's age in days based on years, months, weeks, and days. The code is as follows:

```
Line 11 Col 1 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int tdays,y,m,w,d;
clrscr();
printf("Enter baby age in years, months, weeks and days ");
scanf("%d%d%d%d",&y,&m,&w,&d);
tdays=y*365+m*30+w*7+d;
printf("Baby age %d days",tdays);
getch();
}
```

The bottom screenshot shows the program's execution. It prompts the user to enter the baby's age in years, months, weeks, and days. The user has entered "1 4 2 1", and the program has calculated and displayed "Baby age 500 days_".



The screenshot shows a Windows 10 desktop environment. A terminal window titled 'TC' is open, displaying the following text: 'Enter baby age in years, months, weeks and days 22 3 25 1' followed by 'Baby age 8296 days'. The taskbar at the bottom contains several application icons, including Windows Explorer, DEV, zm, and others. The system tray on the right shows the time as 9:27 AM and the date as 18-Jul-24.

```
TC
Enter baby age in years, months, weeks and days 22 3 25 1
Baby age 8296 days
```

Celsius to Fahrenheit:

37⁰ Celsius is 98.4⁰ Fahrenheit

The image shows two screenshots of the Turbo C++ (TC) IDE. The top screenshot displays the source code for a program that converts Fahrenheit to Celsius. The code includes headers for stdio.h and conio.h, defines a main function, declares float variables c and f, clears the screen, prompts the user for a temperature in Celsius, reads the input, calculates the Fahrenheit equivalent, and prints the result. The bottom screenshot shows the program's execution. It prompts the user to enter a temperature in Celsius, and when 37 is entered, it outputs 37.0° Celsius is 98.6° Fahrenheit.

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 57 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
float c, f;
clrscr();
printf("Enter temp in celsius "); scanf("%f",&c);
f = c*1.8+32;
printf("%.1f°C Celsius is %.1f°C Fahrenheit",c,248,f,248);
getch();
}
```

TC

Enter temp in celsius 37
37.0° Celsius is 98.6° Fahrenheit_

Fahrenheit to Celsius:

$$C = f - 32 * 5/9$$

The image shows two screenshots of a Turbo C++ (TC) IDE. The top screenshot displays the source code of a C program for converting Fahrenheit to Celsius. The code includes `<stdio.h>` and `<conio.h>`, defines a `main` function, declares `float c, f;`, clears the screen with `clrscr();`, prompts the user to enter a temperature in Fahrenheit, reads the input with `scanf("%f",&f);`, calculates the Celsius value using the formula `c = (f-32)*5/9;`, and prints the result with `printf("%.1f° Fahrenheit is %.1f° Celsius",f,248,c,248);`. The bottom screenshot shows the program's execution. It prompts "Enter temp in Fahrenheit 98.6", and the output is "98.6° Fahrenheit is 37.0° Celsius_". The Windows taskbar at the bottom of both screenshots shows the time as 9:38 AM on 18-Jul-24.

```
File Edit Run Compile Project Options Debug Break/watch
Line 8 Col 11 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
float c, f;
clrscr();
printf("Enter temp in Fahrenheit "); scanf("%f",&f);
c = (f-32)*5/9;
printf("%.1f° Fahrenheit is %.1f° Celsius",f,248,c,248);
getch();
}
```

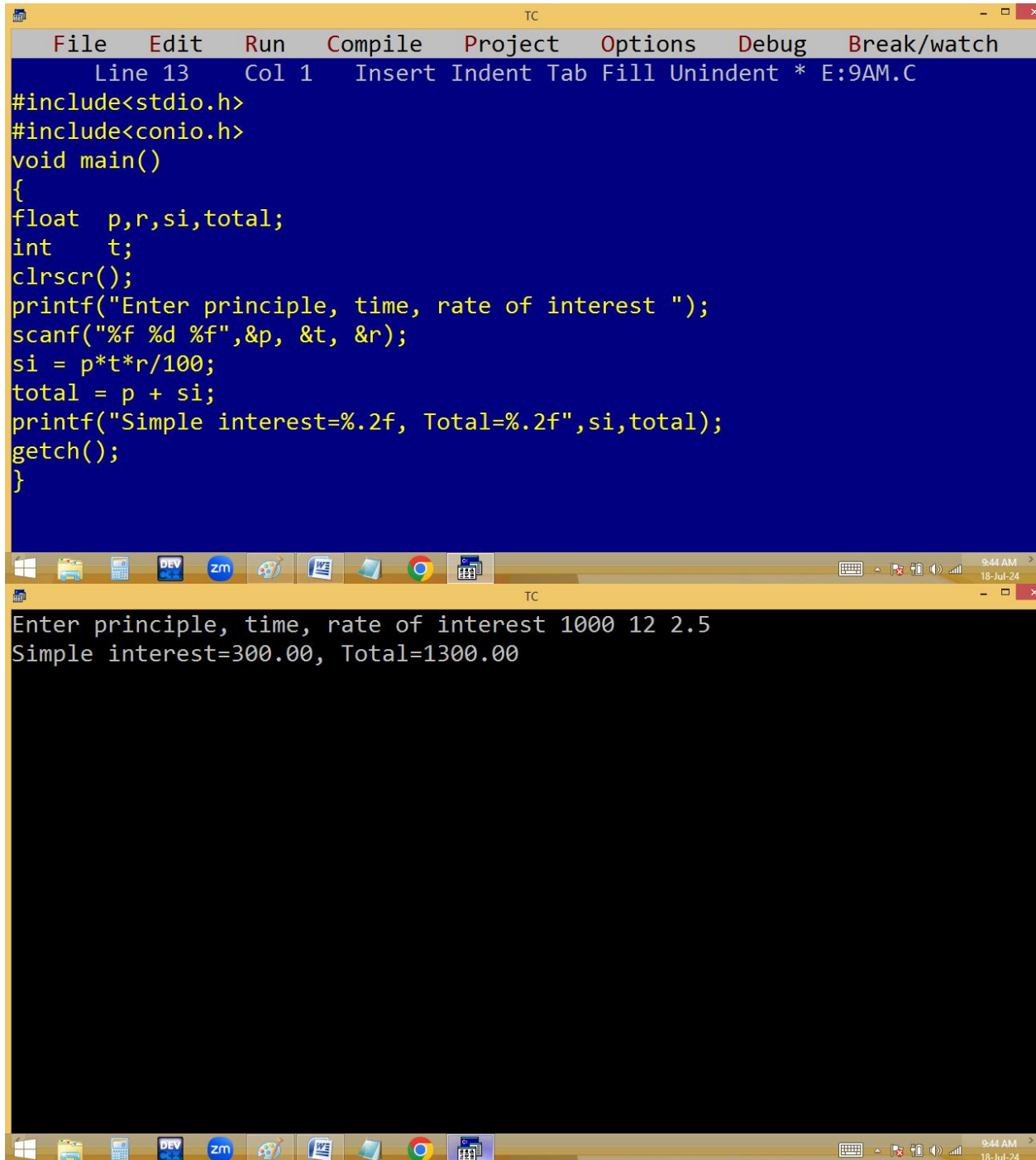
Enter temp in Fahrenheit 98.6
98.6° Fahrenheit is 37.0° Celsius_

Find the simple interest.

$$p*t*r/100$$

$10 \times 2.5 = 25/-$ per month
 $12 \times 25 = 300$ si
 $1000 + 300 = 1300/-$ total

principle = 1000
time = 12 months
rate of interest = 2.5



The image shows a screenshot of a Turbo C++ (TC) IDE. The top window displays the source code for a C program that calculates simple interest. The code includes headers for `stdio.h` and `conio.h`, defines a `main` function, and declares variables for principle (`p`), rate (`r`), time (`t`), simple interest (`si`), and total (`total`). It prompts the user to enter these values and then calculates and displays the simple interest and total amount.

```
#include<stdio.h>
#include<conio.h>
void main()
{
float  p,r,si,total;
int    t;
clrscr();
printf("Enter principle, time, rate of interest ");
scanf("%f %d %f",&p, &t, &r);
si = p*t*r/100;
total = p + si;
printf("Simple interest=%.2f, Total=%.2f",si,total);
getch();
}
```

The bottom window shows the execution output of the program. The user has entered the values 1000, 12, and 2.5 for principle, time, and rate of interest respectively. The program outputs the simple interest as 300.00 and the total as 1300.00.

```
Enter principle, time, rate of interest 1000 12 2.5
Simple interest=300.00, Total=1300.00
```

Read a customer id, name, Quantity purchased and rate of item. Find the amount, 35% discount and total.

The image shows a screenshot of the Turbo C++ (TC) IDE. The top window displays the source code of a C program. The code includes headers for `stdio.h` and `conio.h`, and defines a `main` function. Inside `main`, it declares variables for `id` (int), `name` (char array of size 20), `qty`, `price`, `amount`, `disc`, and `total` (all floats). It uses `clrscr()` to clear the screen, then `printf` to prompt the user for consumer details. `scanf` reads the input. The program calculates `amount = qty * price`, `disc = amount * 0.35` (commented as `/* amount * 35/100 */`), and `total = amount - disc`. Finally, it prints the results with two decimal places and uses `getch()` to pause before exiting.

```
Line 14 Col 68 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
    int id;
    char name[20];
    float qty, price, amount,disc, total;
    clrscr();
    printf("Enter consumer id, name, Quantity purchased and rate of item ");
    scanf("%d %s %f %f",&id, name, &qty, &price);
    amount = qty * price;
    disc    = amount * 0.35; /* amount * 35/100 */
    total   = amount - disc;
    printf("Amount=%.2f, Discount=%.2f, Total=%.2f",amount,disc,total);
    getch();
}
```

The bottom window shows the program's execution. It displays the same prompt as the code, followed by the user input: `1 radhi 2 10`. The output shows the calculated values: `Amount=20.00, Discount=7.00, Total=13.00`. The Windows taskbar at the bottom shows the time as 9:53 AM on 18-Jul-24.

```
TC
Enter consumer id, name, Quantity purchased and rate of item
1 Rishi 1 100
Amount=100.00, Discount=35.00, Total=65.00_
```

```
TC
Enter consumer id, name, Quantity purchased and rate of item
3 Kumari 1 1
Amount=1.00, Discount=0.35, Total=0.65
```

Flexible discount:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int id;
char name[20];
float qty, price, amount,disc, total;
clrscr();
printf("Enter consumer id, name, Quantity purchased and rate of item ");
scanf("%d %s %f %f",&id, name, &qty, &price);
amount = qty * price;
printf("Amount=%.2f\n",amount);
printf("Enter discount % ");scanf("%f",&disc);
disc = amount * disc/100;
total = amount - disc;
printf("Discount=%.2f, Total=%.2f",disc,total);
getch();
}
```

Enter consumer id, name, Quantity purchased and rate of item
1 kumari 1 1
Amount=1.00
Enter discount % 0
Discount=0.00, Total=1.00

```
TC
Enter consumer id, name, Quantity purchased and rate of item
2 bablu 1 2500
Amount=2500.00
Enter discount % 5
Discount=125.00, Total=2375.00_
```

```
TC
Enter consumer id, name, Quantity purchased and rate of item
2 krish 1 98000
Amount=98000.00
Enter discount % 80
Discount=78400.00, Total=19600.00

TC
Enter consumer id, name, Quantity purchased and rate of item
1 wife 1 2000
Amount=2000.00
Enter discount % 100
Discount=2000.00, Total=0.00
```

CONTROL STATEMENTS / CONTROL STRUCTURES

They are used to control program execution order.

CONTROL STATEMENTS

Unconditional branching

1. goto label
2. break
3. continue
4. return
5. exit() // function

Conditional Branching

1. if
 - a. simple if
 - b. if..else
 - c. if..else if ladde
 - d. nested if
2. switch

Loops/Iterations

1. entry / pre controlled
 - a. while
 - b. for
2. exit / post controlled
 - a. do..while

goto label / jumping statement:

```
TC
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
goto a;
c:
puts("Hyd");goto last;
b:
puts("Ameerpet");
goto c;
a:
puts("Naresh IT");
goto b;
last:
getch();
}
```

Naresh IT
Ameerpet
Hyd

TC

The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the source code editor, titled 'TC', with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a status bar (Line 1, Col 1, Insert, Indent, Tab, Fill, Unindent, * E:9AM.C). The code is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
    clrscr();
    goto a;
c:
    puts("Hyd"); getch(); return;
b:
    puts("Ameerpet");
    goto c;
a:
    puts("Naresh IT");
    goto b;
}
```

The bottom window is the output console, also titled 'TC', which displays the program's output:

```
Naresh IT
Ameerpet
Hyd
```

The Windows taskbar at the bottom shows the time as 10:33 AM and 10:34 AM on 18-Jul-24, along with various system icons and application icons like DEV, zm, and Chrome.

```
TC
Line 17 Col 29 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
#include<process.h> #include<stdlib.h>
void main()
{
clrscr();
goto a;
c:
puts("Hyd"); getch(); exit(0);
b:
puts("Ameerpet");
goto c;
a:
puts("Naresh IT");
goto b;
}

TC
Naresh IT
Ameerpet
Hyd
```

```
TC
Line 1 Col 1 Insert Indent Tab Fill Unindent E:9AM.C
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
start:
textcolor(random(16));
textbackground(random(16));
cprintf("KISHORE");
goto start;
}
```

