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The screenshot shows the CodeBlocks IDE interface. The top menu bar includes icons for file operations like New, Open, Save, and Print, followed by search and settings icons. Below the menu is a toolbar with various project management and file-related buttons. The left sidebar is titled 'Management' and contains tabs for 'Projects', 'Files', and 'FSymbols'. Under 'Projects', there's a 'Workspace' section with a folder icon and a project named 'To convert days to years'. This project has a 'Sources' folder containing the file 'main.c'. The main workspace on the right displays the source code for 'main.c'.

```
main.c x
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     int days, weeks, years;
7     printf("enter total number of days");
8     scanf("%d", & days);
9     years = (days / 365);
10    weeks = (days % 365)/7;
11    days = weeks%7;
12    printf("years: %d\n", years);
13    printf("weeks: %d\n", weeks);
14    printf("days:%d", days);
15
16 }
17
```

The screenshot shows the terminal window of the CodeBlocks IDE. It displays the command to run the program, the input provided, the output of the program, and the final message. The terminal window title is "C:\Users\GODWIN KATEY O K\Desktop\C Program\To convert days to years\bin\Debug\To convert days to years.exe".

```
Management
Projects Files FS
Workspace Sources
"C:\Users\GODWIN KATEY O K\Desktop\C Program\To convert days to years\bin\Debug\To convert days to years.exe"
enter total number of days1343
years: 3
weeks: 35
days:8
Process returned 0 (0x0)   execution time : 5.551 s
Press any key to continue.

Set variable: PATH=.;C:\Program Files\CodeBlocks\MinGW\bin;C:\Program Files\CodeBlocks\MinGW;C:\
```

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2.

The screenshot shows a C IDE interface. On the left, there's a 'Management' sidebar with 'Projects', 'Files', and 'FSymbols' tabs, and a 'Workspace' section containing a project named 'distance between said points' with a 'Sources' folder containing 'main.c'. The main window displays the 'main.c' file content:

```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     float x1, y1, x2, y2, distance;
7     printf("type value of x1: ");
8     scanf("%f", &x1);
9     printf("type value of y1: ");
10    scanf("%f", &y1);
11    printf("type value of x2: ");
12    scanf("%f", &x2);
13    printf("type value of y2: ");
14    scanf("%f", &y2);
15    distance = ((x2-x1)*(x2-x1)+(y2-y1)*(y2-y1));
16    printf("distance between said points is: %.4f", sqrt(distance));
17    printf("\n");
18
19
20 }
21
```

RESULT

The screenshot shows a terminal window with the command line: "C:\Users\GODWIN KATEY O K\Desktop\C Program\distance between said points\bin\Debug\distance between said points.exe". The output shows the program's execution:

```
type value of x1: 3
type value of y1: 5
type value of x2: 8
type value of y2: 6
distance between said points is: 8.0623
Process returned 0 (0x0)  execution time : 14.104 s
```

At the bottom of the terminal window, there is a status bar message: "Checking for existence: C:\Users\GODWIN KATEY O K\Desktop\C Program\distance between said point".

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3.

The screenshot shows the Code::Blocks IDE interface. On the left is the 'Management' sidebar with 'Projects', 'Files', and 'FSymbols' tabs, currently showing the 'Workspace' tab which contains a project named 'triangle'. Below it is the 'Sources' folder. The main workspace is titled 'main.c X' and displays the following C code:

```
4     int main()
5     {
6         float x, y, z, P, A;
7         printf("\nInput x: ");
8         scanf("%f", &x);
9         printf("\nInput y: ");
10        scanf("%f", &y);
11        printf("\nInput z: ");
12        scanf("%f", &z);
13        if(x < (y+z) &&y < (x+z) &&z < (y+x))
14        {
15            P = x+y+z;
16            printf("Perimeter = %.1f\n", P);
17        }
18        else
19        {
20            printf("can not create triangle");
21        }
22    }
23
24
```

Below the code editor is a 'Logs & others' panel containing several tabs: 'Code::Blocks', 'Search results', 'Cccc', 'Build log', 'Build messages', and 'CppCheck/Vera++'. The 'Build log' tab is active, showing the command 'gcc -o C:\Users\GODWIN KATEY O K\Desktop\C Program\triangle\bin\Debug\triangle.exe'.

RESULTS

The screenshot shows the terminal window of the Code::Blocks IDE. It displays the output of the program 'triangle' when run. The user inputs values for x, y, and z, and the program calculates the perimeter. If the input values do not form a triangle, it prints an error message.

```
Input x: 5
Input y: 4
Input z: 3
Perimeter = 12.0

Process returned 0 (0x0)   execution time : 7.244 s
Press any key to continue.
```

The screenshot shows the terminal window of the Code::Blocks IDE. It displays the output of the program 'triangle' when run with invalid input. The user inputs values for x, y, and z, and the program prints an error message indicating that a triangle cannot be created with the given side lengths.

```
<gl>Input x: 131
<gl>Input y: 73
<gl>Input z: 2
Management can not create triangle
Process returned 0 (0x0)   execution time : 11.390 s
Press any key to continue.
```

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4.

The screenshot shows a C IDE interface with the following details:

- Management** tab is selected in the top-left.
- Projects** tab shows a single project named "baby age".
- Files** tab shows a single source file named "main.c".
- FSymbols** tab is also present.
- The main editor window displays the following C code:

```
5     int age;
6     int baby_age_count=0, school_age_count=0, adult_age_count=0;
7     int count=0;
8     while(count<20)
9     {
10        printf("Enter age [%d]:", count+1);
11        scanf("%d", &age);
12        if (age>=0 && age<=4)
13            baby_age_count++;
14        else if (age>=5 && age<=17)
15            school_age_count++;
16        else
17            adult_age_count++;
18        count++;
19    }
20    printf("baby ages=: %d\n", baby_age_count);
21    printf("school ages=: %d\n", school_age_count);
22    printf("adult ages=: %d\n", adult_age_count);
23    return 0;
24
25
26 }
```

RESULT

The screenshot shows the terminal window output of the "baby age" program:

- The title bar indicates the path: "C:\Users\GODWIN KATEY O K\Desktop\C Program\baby age\bin\Debug\baby age.exe"
- The terminal window shows the following interaction:

 - The program prompts for 20 ages from index 1 to 20.
 - After input, it prints the counts of ages in three categories: Baby, School, and Adult.
 - The final output is:

```
Enter age [1]:1
Enter age [2]:2
Enter age [3]:3
Enter age [4]:4
Enter age [5]:5
Enter age [6]:6
Enter age [7]:7
Enter age [8]:8
Enter age [9]:9
Enter age [10]:10
Enter age [11]:11
Enter age [12]:12
Enter age [13]:13
Enter age [14]:14
Enter age [15]:15
Enter age [16]:16
Enter age [17]:17
Enter age [18]:24
Enter age [19]:34
Enter age [20]:65
baby ages=: 4
school ages=: 13
adult ages=: 3
```
 - The process exits with a status of 0.

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5.

The screenshot shows a C IDE interface with two panes. The left pane is titled 'Management' and contains tabs for 'Projects', 'Files', and 'FSymbols'. It shows a 'Workspace' with a project named 'gambling' containing a 'Sources' folder. The right pane is titled 'main.c' and displays the following C code:

```
#include <stdlib.h>
int main()
{
    int rgn=0, count=0, num;
    int stime;
    int ltime;
    ltime=time(NULL);
    stime=(unsigned)ltime/2;
    srand(stime);
    rgn=rand()%100;
    while(1)
    {
        count+=1;
        printf("guess a number from 1-100:");
        scanf("%d", &num);
        if(rgn==num)
        {
            printf("Nice guess,you won $10:");
        }
        else if (rgn>num)
        {
            printf("incorrect guess, try a higher number;");
        }
    }
}
```

The screenshot shows the same C IDE interface with the 'main.c' file now containing more code. The additional code handles a maximum of 7 trials and includes a break statement. The completed code is as follows:

```
count+=1;
printf("guess a number from 1-100:");
scanf("%d", &num);
if(rgn==num)
{
    printf("Nice guess,you won $10:");
}
else if (rgn>num)
{
    printf("incorrect guess, try a higher number;");
}
else if (rgn<num)
{
    printf("incorrect guess, try a lesser number;");
}
if (count==7)
{
    printf("exceeded number of trials, maybe next time:");
    break;
}
return 0;
```

RESULT

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The screenshot shows a terminal window with the following output:

```
guess a number from 1-100:4
incorrect guess, try a higher number;)guess a number from 1-100:7
incorrect guess, try a higher number;)guess a number from 1-100:41
incorrect guess, try a higher number;)guess a number from 1-100:90
incorrect guess, try a lesser number;)guess a number from 1-100:80
incorrect guess, try a higher number;)guess a number from 1-100:81
Nice guess,you won $10:)guess a number from 1-100:47
incorrect guess, try a higher number;)exceeded number of trials, maybe next time:(

Process returned 0 (0x0)   execution time : 98.313 s
Press any key to continue.
```