Q. FOUR SEASONERS

Dinesh also joined the group of 3 idiots and now their group is called Four Seasoners. Meanwhile, Binoy has moved to a new house in the same locality. Now the houses of Ajay, Binoy and Chandru are in the located in the shape of a triangle, Dinesh also has moved to a house in the same locality. When Ajay asked Dinesh about the location of his house , Dinesh said that his house is at the centroid from the houses of the other 3. Though Ajay was good in Mathematics, he was puzzled. Can you please help Ajay out?

Given the 3 vertices {(x1,y1), (x2,y2) and (x3,y3)} of a triangle, write a C program to determine the centroid of the 3 vertices.

Input Format:

Input consists of 6 integers. The first integer corresponds to x1 . The second integer corresponds to y1. The third and fouth integers correspond to x2 and y2 respectively.

The fifth and sixth integers correspond to x3 and y3 respectively.

Output Format:

Refer Sample Input and Output for exact formatting specifications.

[All floating point values are displayed correct to 1 decimal place]

Source Code

```
#include <stdio.h>
int main()
{
  int x1,x2,x3,y1,y2,y3;
  float x,y;
  scanf("%d",& x1);
  scanf("%d",& y1);
  scanf("%d",& x2);
  scanf("%d",& y2);
  scanf("%d",& x3);
  scanf("%d",& y3);
  x=(x1+x2+x3);
  x=x/3;
  y=(y1+y2+y3);
  y=y/3;
  printf("Dinesh's house is located at (%.1f,%.1f)",x,y);
 return 0;
}
```

Sample Input

```
2 4
10 15
5 8
```

Sample Output

```
Dinesh's house is located at (5.7,9.0)
```

Result

Thus, Program " **FOUR SEASONERS** " has been successfully executed

Course: C **Session:** Input and Output **Timestamp:** 2021-1-9 17:54:01 **Register Number:** RA2031241010094

Q. Fact is Fact

Dolu have a homework to find sum of factors of a given number. Use C language to solve Dolus Problem

Source Code

```
#include <stdio.h>
int main()
{
  int no,sum,x;
  scanf("%d",& no);
  for(x=1;x<=no;x++)
  {
    if(no%x==0)
    {
      sum=sum+x;
      printf("%d ", x);
    }
 }
  printf("\n");
  printf("Sum=%d",sum);
 return 0;
}
```

Sample Input

25

Sample Output

1 5 25
Sum=31

Result

Thus, Program " **Fact is Fact** " has been successfully executed

Course: C **Session:** Input and Output **Timestamp:** 2021-1-9 17:55:10 **Register Number:** RA2031241010094

Q. Change case

program to convert upper case to lower case and lower case to upper case

Source Code

```
#include <stdio.h>
int main()
{
  char str[100];
  int i;
  scanf("%s",str);
  for(i=0;i<=100;i++)
  {
    if(str[i]>=65 && str[i]<=90)
      str[i]=str[i]+32;
    else if(str[i]>=97&&str[i]<=122)
      str[i]=str[i]-32;
  }
  printf("%s", str);
 return 0;
}
```

Sample Input

hai

Sample Output

HAI

Result

Thus, Program " **Change case** " has been successfully executed

Course: C **Session:** Input and Output **Timestamp:** 2021-1-9 17:55:44 **Register Number:** RA2031241010094

Q. Miney Mouse

Mickey and Miney are two friends. Goofy was one of the Mickey's enemy.He was jealous of Mickey because Mickey was liked by everyone. One day Mickey and Miney went on to a trip. Goofy planned to kidnap Miney. He kidnapped Miney and kept her in one of the hot balloons tied up to a height. There were 50 hot balloons numbered from one. Each balloon will fly to a certain height. Only the numbers having 4 and 8 as its factors can fly upto the height of the Miney's balloon. Mickey was confused and he didn't know which numbered balloon can fly to Miney.

So write a program to help the Mickey in finding the balloon.

Input format:

Inputs consists of a single integer which corresponds to number printed on the balloon. Assume that the input value is between 1 and 50.

Output Format:

Display whether the given Balloon will fly to Miney or Not.

[All text in bold corresponds to input and the rest corresponds to output]

Source Code

```
#include <stdio.h>
int main()
{
  int no;
  scanf("%d",& no);
  if(no>0&&no<=50)
  {
    if(no%4==0&&no%8==0)
       printf("This balloon can fly to miney");
      else
        printf("This balloon cannot fly to miney");
  }
 return 0;
}
```

Sample Input

32

Sample Output

This balloon can fly to miney

Result

Thus, Program " **Miney Mouse** " has been successfully executed

Course: C **Session:** Input and Output **Timestamp:** 2021-1-9 17:56:10 **Register Number:** RA2031241010094

Q. TIME CONVERSION

Harshas teacher give one assignment to him. He should write a code to find the time entered in hours,seconds and minutes into seconds. Help him to solve this task.

Source Code

```
#include <stdio.h>
int main()
{
  int h,m,s,sec;
  scanf("%d",&h);
  scanf("%d",&m);
  scanf("%d",&s);
  sec=h*3600+m*60+s;
 printf("%d",sec);
 return 0;
}
```

Sample Input

2 30 4

Sample Output

9004

Result

Thus, Program " **TIME CONVERSION** " has been successfully executed

Course: C **Session:** Input and Output **Timestamp:** 2021-1-9 17:56:37 **Register Number:** RA2031241010094

Q. Gizmos

An online retailer sells two products: widgets and gizmos.
Each widget weighs 75 grams and Each gizmo weighs 112 grams.
Write a program that reads the number of widgets and the number of gizmos in an order from the user.
Then your program should compute and display the total weight of the order.

Source Code

```
#include <stdio.h>
int main()
{
  int wid,giz;
  float tw;
  scanf("%d",& wid);
  scanf("%d",& giz);
  tw=(wid*75+giz*112);\
  tw=tw/1000;
  printf("widgets=%d\n",wid);
  printf("gizmo=%d\n",giz);
  printf("Total weight=%.3f\n",tw);
 return 0;
}
```

Sample Input

```
28
22
```

Sample Output

```
widgets=28
gizmo=22
Total weight=4.564
```

Result

Thus, Program " **Gizmos** " has been successfully executed

Course: C **Session:** Input and Output **Timestamp:** 2021-1-9 17:58:46 **Register Number:** RA2031241010094

Q. Profit Game

Each Sunday, a newspaper agency sells x copies of a certain newspaper for Rs.a per copy. The cost to the agency of each newspaper is Rs.b
The agency pays a fixed cost for storage, delivery and so on of Rs.100 per Sunday.
The newspaper agency wants to calculate the profit obtained on sundays. Can you please help them out by writing a C program to compute the profit given x, a and b.
Input Format:
Input consists of 3 integers --- x, a and b. X is the number of copies sold, a is the cost per copy and b is the cost the agency spends per copy.

Output Format:
Refer Sample Input and Output for exact formatting specifications.

Sample Input and Output:
[All text in bold corresponds to input and the rest corresponds to output]

Source Code

```
#include <stdio.h>
int main()
{
  int x,a,b,pt;
  scanf("%d",& x);
  scanf("%d",& a);
  scanf("%d",& b);
  pt=x*a-x*b-100;
  printf("The profit obtained is Rs=%d",pt);
 return 0;
}
```

Sample Input

```
1000
2
1
```

Sample Output

```
The profit obtained is Rs=900
```

Result

Thus, Program " **Profit Game** " has been successfully executed

Course: C **Session:** Input and Output **Timestamp:** 2021-1-9 17:59:30 **Register Number:** RA2031241010094

Q. ID and SHIP

Write a program that takes in a letter class ID of a ship and display the equivalent string class description of the given ID. Use the table below.
Class ID Ship Class
B or b BattleShip
C or c Cruiser
D or d Destroyer
F or f Frigate

Input Format:
The first line contains an integer T, total number of test cases. Then follow T lines, each line contains a character.

Source Code

```
#include <stdio.h>
int main()
{
   int n,i;
   char ch;
   scanf("%d",& n);
   for(i=0;i<2*n;i++)
   {
     scanf("%c",&ch);
       switch(ch)
       {
         case 'b':
           printf("Battleship\n");
           break;
         case 'B':
           printf("BattleShip\n");
           break;
         case 'c':
           printf("Cruiser\n");
           break;
         case 'C':
           printf("Cruiser\n");
           break;
         case 'd':
           printf("Destroyer\n");
           break;
         case 'D':
           printf("Destroyer\n");
           break;
         case 'f':
           printf("Frigate\n");
           break;
         case 'F':
           printf("Frigate\n");
           break;
       }
    }
 return 0;
}
```

Sample Input

```
1
B
```

Sample Output

```
BattleShip
```

Result

Thus, Program " **ID and SHIP** " has been successfully executed

Course: C **Session:** Input and Output **Timestamp:** 2021-1-9 18:00:18 **Register Number:** RA2031241010094

Q. Printing Alphabets

Remove Characters in the given String Except Alphabets

Source Code

```
#include <stdio.h>
int main()
{
  char str[100];
  int i,c,j=0;
  scanf("%s", str);
  for(i=0;str[i]!='\0';i++)
        {
          while(!((str[i]>='a'&&str[i]<='z')||(str[i]>='A'&&str[i]<='Z')||str[i]=='\0'))
          {
            for(j=i;str[j]!='\0';j++)
            {
              str[j]=str[j+1];
            }
            str[j]='\0';
          }
  }
  printf("%s",str);
  return 0;
}
```

Sample Input

t28lkj

Sample Output

tlkj

Result

Thus, Program " **Printing Alphabets** " has been successfully executed

Course: C **Session:** Input and Output **Timestamp:** 2021-1-9 18:01:03 **Register Number:** RA2031241010094

Q. IO 14

Ram was a popular maths teacher, he gave a 4 digit number to his students as a assignment .He has to identify ones portion of given number. Please help his students to identify and display the output:

Input and Output Format:

Input can be an integer

Explanation :

Let us say ram given number is 1234 and his student need to identify ones portion is 4

Source Code

```
#include <stdio.h>
int main()
{
  int no,dig;
  scanf("%d",&no);
  dig=no%10;
  printf("The Digit at ones place of %d",no);
  printf(" is=%d",dig);
 return 0;
}
```

Sample Input

72

Sample Output

The Digit at ones place of 72 is=2

Result

Thus, Program " **IO 14** " has been successfully executed