

```
/*
```

```
CACIOR MARIUS VALENTIN
```

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```
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```
ACSL - Contest 3
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```
Junior Division
```

```
*/
```

```
#include <fstream>
```

```
using namespace std;
```

```
ifstream fin("veitch.in");
```

```
ofstream fout("veitch.out");
```

```
bool v[5][5], prim;
```

```
void schimb(char a, int &b)
```

```
{
```

```
    if(a=='0')
```

```
    {
```

```
        b=0;
```

```
        return ;
```

```
    }if(a=='1')
```

```
    {
```

```
        b=1;
```

```
        return ;
```

```
    }if(a=='2')
```

```
    {
```

```
        b=2;
```

```
        return ;
```

```
    }if(a=='3')
```

```
    {
```

```
        b=3;
```

```
        return ;
```

```
    }if(a=='4')
```

```
{  
    b=4;  
    return ;  
}if(a=='5')  
{  
    b=5;  
    return ;  
}if(a=='6')  
{  
    b=6;  
    return ;  
}if(a=='7')  
{  
    b=7;  
    return ;  
}if(a=='8')  
{  
    b=8;  
    return ;  
}if(a=='9')  
{  
    b=9;  
    return ;  
}  
if(a=='A')  
{  
    b=10;  
    return ;  
}  
if(a=='B')  
{  
    b=11;  
    return ;  
}
```

```
}  
if(a=='C')  
{  
    b=12;  
    return ;  
}  
if(a=='D')  
{  
    b=13;  
    return ;  
}  
if(a=='E')  
{  
    b=14;  
    return ;  
}  
if(a=='F')  
{  
    b=15;  
    return ;  
}  
}  
int main()  
{  
    char a, b;  
    int c, d, i, j;  
    for(int t=1; t<=5; t++)  
    {  
fin >> a >> b;  
c=a; d=b;  
schimb(a, c);  
schimb(b, d);  
switch(c)
```

```
{  
case 1:  
    v[1][4]=1;  
    break;  
case 2:  
    v[1][3]=1;  
    break;  
case 3:  
    v[1][4]=v[1][3]=1;  
    break;  
case 4:  
    v[1][2]=1;  
    break;  
case 5:  
    v[1][2]=v[1][4]=1;  
    break;  
case 6:  
    v[1][2]=v[1][3]=1;  
    break;  
case 7:  
    v[1][2]=v[1][3]=v[1][4]=1;  
    break;  
case 8:  
    v[1][1]=1;  
    break;  
case 9:  
    v[1][1]=v[1][4]=1;  
    break;  
case 10:  
    v[1][1]=v[1][3]=1;  
    break;  
case 11:  
    v[1][1]=v[1][3]=v[1][4]=1;
```

```
break;
```

```
case 12:
```

```
v[1][1]=v[1][2]=1;
```

```
break;
```

```
case 13:
```

```
v[1][1]=v[1][2]=v[1][4]=1;
```

```
break;
```

```
case 14:
```

```
v[1][1]=v[1][2]=v[1][3]=1;
```

```
break;
```

```
case 15:
```

```
v[1][1]=v[1][2]=v[1][3]=v[1][4]=1;
```

```
break;
```

```
}
```

```
switch(d)
```

```
{
```

```
case 1:
```

```
v[2][4]=1;
```

```
break;
```

```
case 2:
```

```
v[2][3]=1;
```

```
break;
```

```
case 3:
```

```
v[2][4]=v[2][3]=1;
```

```
break;
```

```
case 4:
```

```
v[2][2]=1;
```

```
break;
```

```
case 5:
```

```
v[2][2]=v[2][4]=1;
```

```
break;
```

```
case 6:
```

```
v[2][2]=v[2][3]=1;
```

```
break;
```

```
case 7:
```

```
v[2][2]=v[2][3]=v[2][4]=1;
```

```
break;
```

```
case 8:
```

```
v[2][1]=1;
```

```
break;
```

```
case 9:
```

```
v[2][1]=v[2][4]=1;
```

```
break;
```

```
case 10:
```

```
v[2][1]=v[2][3]=1;
```

```
break;
```

```
case 11:
```

```
v[2][1]=v[2][3]=v[2][4]=1;
```

```
break;
```

```
case 12:
```

```
v[2][1]=v[2][2]=1;
```

```
break;
```

```
case 13:
```

```
v[2][1]=v[2][2]=v[2][4]=1;
```

```
break;
```

```
case 14:
```

```
v[2][1]=v[2][2]=v[2][3]=1;
```

```
break;
```

```
case 15:
```

```
v[2][1]=v[2][2]=v[2][3]=v[2][4]=1;
```

```
break;
```

```
}
```

```
for(i=1;i<=2;i++)
```

```
{
```

```
if(v[i][1]==1&&v[i][2]==1&&v[i][3]==1&&v[i][4]==1)
```

```
{
```

```

if(prim)
    fout<<'+';
else
    prim=1;
if(i==1)
    fout<<"B";
else
    fout<<"~B";
v[i][1]=v[i][2]=v[i][3]=v[i][4]=0;
}
}
for(i=1;j<=3;i++)
{
if(v[1][i]==1&&v[1][i+1]==1&&v[2][i]==1&&v[2][i+1]==1)
{
if(prim)
    fout<<'+';
else
    prim=1;
switch(i)
{
case 1:
    fout<<"A";
    break;
case 2:
    fout<<"C";
    break;
case 3:
    fout<<"~A";
    break;
}
v[1][i]=0;

```

```

v[1][i+1]=0;
v[2][i]=0;
v[2][i+1]=0;
}
}
if(v[1][1]==1&&v[1][4]==1&&v[2][1]==1&&v[2][4]==1)
{
    if(prim)
        fout<<'+';
    else
        prim=1;
    fout<<"~C";
    v[1][1]=v[1][4]=v[2][1]=v[2][4]=0;
}
for(i=1;i<=2;i++)
    for(j=1;j<=3;j++)
        if(v[i][j]==1&&v[i][j+1]==1)
            {
                if(prim)
                    fout<<'+';
                else
                    prim=1;
                if(j==1)
                    fout<<"A";
                if(j==3)
                    fout<<"~A";
                if(i==1)
                    fout<<"B";
                else
                    fout<<"~B";
                if(j==2)
                    fout<<"C";
                v[i][j]=v[i][j+1]=0;
            }

```



```

    }
for(i=1;i<=4;i++)
{
    if(v[1][i]==1&&v[2][i]==1)
    {
        if(prim)
            fout<<'+';
        else
            prim=1;
        if(i<3)
            fout<<"A";
        else
            fout<<"~A";
        if(i==2 || i==3)
            fout<<"C";
        else
            fout<<"~C";
        v[1][i]=v[2][i]=0;
    }
}
for(i=1;i<=2;i++)
    if(v[i][1]==1&&v[i][4]==1)
    {
        if(prim)
            fout<<'+';
        else
            prim=1;
        if(i==1)
            fout<<"B~C";
        else
            fout<<"~B~C";
        v[i][1]=v[i][4]=0;
    }
}

```

```
for(i=1;i<=2;i++)
  for(j=1;j<=4;j++)
    if(v[i][j]==1)
      {
        if(prim)
          fout<<'+';
        else
          prim=1;
        if(j<3)
          fout<<"A";
        else
          fout<<"~A";
        if(i==1)
          fout<<"B";
        else
          fout<<"~B";
        if(j==2 || j==3)
          fout<<"C";
        else
          fout<<"~C";
        v[i][j]=0;
      }
    fout<<"\n";
  }
return 0;
}
```