## GE23131-Programming Using C-2024





Question 1
Correct
Marked out of 3.00
F Flag question

Write a program that determines the name of a shape from its number of sides. Read the number of sides from the user and then report the appropriate name as part of a meaningful message. Your program should support shapes with anywhere from 3 up to (and including) 10 sides. If a number of sides outside of this range is entered then your program should display an appropriate error message.

Sample Input 1

3

Sample Output 1

Triangle

Sample Input 2

7

Sample Output 2

Heptagon

Sample Input 3

11

Sample Output 3

The number of sides is not supported.

```
int main(){
        int a;
4
        scanf("%d",&a);
5
        switch (a){
6
            case 3:
            printf("Triangle");
8
            break;
9
            case 4:
10
            printf("Quadilateral");
11
            break;
12
            case 5:
13
            printf("Pentagon");
14
            break;
15
            case 6:
            printf("Hexagon");
16
17
            break;
18
            case 7:
19
            printf("Heptagon");
20
            break;
21
            case 8:
22
            printf("Octagon");
23
            break;
24
            case 9:
25
            printf("Nonagon");
26
            break;
27
            case 10:
28
            printf("Decagon");
29
            break;
30
            default:
31
            printf("The number of sides is not supported.");
32
33
        return 0;
34 }
```

Input	Expected	Got	
3	Triangle	Triangle	
7	Heptagon	Heptagon	
11	The number of sides is not supported.	The number of sides is not supported.	

Passed all tests!

Question **2**Correct
Marked out of 5.00

Flag question

The Chinese zodiac assigns animals to years in a 12-year cycle. One 12-year cycle is shown in the table below. The pattern repeats from there, with 2012 being another year of the Dragon, and 1999 being another year of the Hare.

Year Animal

```
2002
            Horse
2003
            Sheep
2004
            Monkey
2005
            Rooster
2006
            Dog
2007
            Pig
2008
            Rat
2009
            Ох
2010
            Tiger
2011
            Hare
Write a program that reads a year from the user and displays the animal associated with that year. Your program should work correctly for
any year greater than or equal to zero, not just the ones listed in the table.
Sample Input 1
2004
Sample Output 1
Monkey
Sample Input 2
2010
Sample Output 2
Tiger
Answer: (penalty regime: 0 %)
   1 #include <stdio.h>
      int main(){
           int y;
           scanf("%d",&y);
   5
           if (y%12==8){
   6
   7
               printf("Dragon");}
           if (y%12==9){
   8
   9
               printf("Snake");}
  10
           if (y%12==10){
  11
               printf("Horse");}
```

```
15
            printf("Monkey");}
       if (y%12==1){
16
17
            printf("Rooster");}
18
       if (y%12==2){
19
           printf("Dog");}
        if (y%12==3){
20
            printf("Pig");}
21
22
        if (y%12==4){
23
           printf("Rat");}
       if (y%12==5){
24
           printf("0x");}
25
        if (y%12==6){
26
27
            printf("Tiger");}
28
       if (y%12==7){
29
           printf("Hare");
30
31
32
        return 0;
33 }
```

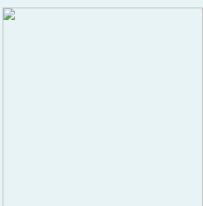
Input	Expected	Got
2004	Monkey	Monkey
2010	Tiger	Tiger

Passed all tests!

Question **3**Correct
Marked out of 7.00

Flag question

Positions on a chess board are identified by a letter and a number. The letter identifies the column, while the number identifies the row, as shown below:



Write a program that reads a position from the user. Use an if statement to determine if the column begins with a black square or a white square. Then use modular arithmetic to report the color of the square in that row. For example, if the user enters a1 then your program should report that

```
Sample Input 1
a 1
Sample Output 1
The square is black.
Sample Input 2
d 5
Sample Output 2
The square is white.
Answer: (penalty regime: 0 %)
   1 #include <stdio.h>
   2 int main(){
           char c;
           int n;
   4
           scanf("%c%d",&c,&n);
   5
   6
           if((c+n)\%2==0){
               printf("The square is black.");
   8
   9
           else{
  10
               printf("The square is white.");
  11
  12
           return 0;
  13 }
```

Input	Expected	Got	
a 1	The square is black.	The square is black.	

