


Status	Finished
Started	Monday, 23 December 2024, 5:33 PM
Completed	Wednesday, 20 November 2024, 6:27 PM
Duration	32 days 23 hours

Question **1**

Correct

Marked out of 3.00

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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.

```
1 #include <stdio.h>
2 int main(){
3     int n;
4     scanf("%d", &n);
5     switch (n){
6         case 3:
7             printf("Triangle");
8             break;
9
10        case 4:
11            printf("Quadrilateral");
12            break;
13
14        case 5:
15            printf("Pentagon");
16            break;
17
18        case 6:
19            printf("Hexagon");
20            break;
21
22        case 7:
23            printf("Heptagon");
24            break;
25
26        case 8:
27            printf("Octagon");
28            break;
29
30        case 9:
31            printf("Nonagon");
32            break;
33
34        case 10:
35            printf("Decagon");
36            break;
37
38        default:
39            printf("The number of sides is not supported.");
40            break;
41    }
42    return 0;
43 }
```

	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
2000	Dragon
2001	Snake
2002	Horse
2003	Sheep
2004	Monkey
2005	Rooster
2006	Dog
2007	Pig
2008	Rat
2009	Ox
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>
2 int main(){
3     int y, i;
4     scanf("%d", &y);
5     i = y%12;
6     switch (i){
7         case 8:
8             printf("Dragon");
9             break;
10
11         case 9:
12             printf("Snake");
13             break;
14
15         case 10:
16             printf("Horse");
17             break;
18
19         case 11:
20             printf("Sheep");
21             break;
22
23         case 0:
24             printf("Monkey");
25             break;
26
27         case 1:
28             printf("Rooster");
29             break;
30
31         case 2:
32             printf("Dog");
33             break;
```

```
34
35     case 3:
36         printf("Pig");
37         break;
38
39     case 4:
40         printf("Rat");
41         break;
42
43     case 5:
44         printf("Ox");
45         break;
46
47     case 6:
48         printf("Tiger");
49         break;
50
51     case 7:
52         printf("Hare");
```

	Input	Expected	Got	
✓	2004	Monkey	Monkey	✓
✓	2010	Tiger	Tiger	✓

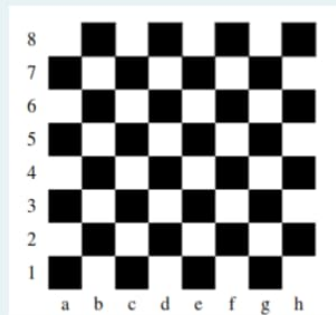
Passed all tests! ✓

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 the square is black. If the user enters d5 then your program should report that the square is white. Your program may assume that a valid position will always be entered. It does not need to perform any error checking.

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(){
3     int b, c, d;
4     char a;
5     scanf("%c %d", &a, &b);
6     c = a%2;
7     d = b%2;
8     if(c == 1 && d == 1){
9         printf("The square is black.");
10    } else if(c == 1 && d == 0){
11        printf("The square is white.");
12    } else if(c == 0 && d == 1){
13        printf("The square is white.");
14    } else {
15        printf("The square is black.");
16    }
17    return 0;
18
19 }
```

	Input	Expected	Got	
✓	a 1	The square is black.	The square is black.	✓
✓	d 5	The square is white.	The square is white.	✓

Passed all tests! ✓

Status	Finished
Started	Monday, 23 December 2024, 5:33 PM
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Question **1**

Correct

Marked out of
3.00

 Flag question

Some data sets specify dates using the year and day of year rather than the year, month, and day of month. The day of year (DOY) is the sequential day number starting with day 1 on January 1st.

There are two calendars - one for normal years with 365 days, and one for leap years with 366 days. Leap years are divisible by 4. Centuries, like 1900, are not leap years unless they are divisible by 400. So, 2000 was a leap year.

To find the day of year number for a standard date, scan down the Jan column to find the day of month, then scan across to the appropriate month column and read the day of year number. Reverse the process to find the standard date for a given day of year.

Write a program to print the Day of Year of a given date, month and year.

Sample Input 1

18

6

2020

Sample Output 1

170