

GE23131-Programming Using C-2024

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Question 1
Correct
Marked out of 3.00
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Status Finished**Started** Monday, 23 December 2024, 5:33 PM**Completed** Thursday, 28 November 2024, 9:46 AM**Duration** 25 days 7 hours

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

```
19 +     {
20 +         X=X+31;
21 +     }
22 + }
23 + else
24 + {
25 +     if(i==2)
26 +     {
27 +         X=X+28;
28 +     }
29 +     else if(1%2==0&&1!=1)
30 +     {
31 +         X=X+31;
32 +     }
33 + }
34 + }
35 + printf("%d",x+d);
36 + return 0;
37 + }
```

	Input	Expected	Got
	18	178	178
	6		
	2828		

Passed all tests!

Question 2

Correct

Marked out of
5.00

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Suppandi is trying to take part in the local village math quiz. In the first round, he is asked about shapes and areas. Suppandi, is confused, he was never any good at math. And also, he is bad at remembering the names of shapes. Instead, you will be helping him calculate the area of shapes.

- When he says rectangle he is actually referring to a square.
- When he says square, he is actually referring to a triangle.
- When he says triangle he is referring to a rectangle
- And when he is confused, he just says something random. At this point, all you can do is say 0.

REC-CIS

2020

Sample Output 1

170

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int d,m,y,i,x=0;
5     scanf("%d %d %d",&d,&m,&y);
6     for(i=1;i<m;i++)
7     {
8         if(y%4==0)
9         {
10             if(i==2)
11             {
12                 x=x+29;
13             }
14             else if(i%2==0&&i!=0)
15             {
16                 x=x+30;
17             }
18             else
19             {
20                 x=x+31;
21             }
22         }
23         else
24         {
25             if(i==2)
26             {
27                 x=x+28;
28             }
29             else if(i%2==0&&i!=1)
30             {
31                 x=x+31;
32             }
33         }
34     }
35     printf("%d",x+d);
```

REC-CIS

Sample Output 1

200

Sample Input 2

5

30

40

Sample Output 2

600

Sample Input 3

R

10

10

Sample Output 3

100

Sample Input 4

G

8

Help Suppandi by printing the correct answer in an integer.

Input Format

- Name of shape (always in upper case R à Rectangle, S à Square, T à Triangle)
- Length of 1 side
- Length of other side

Note: In case of triangle, you can consider the sides as height and length of base

Output Format

- Print the area of the shape.

Sample Input 1

T
10
20

Sample Output 1

200

Sample Input 2

S
5
30

...ing, something funny, so we print

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     char shape;
5     int side1,side2,area;
6     scanf("%c",&shape);
7     scanf("%d",&side1);
8     scanf("%d",&side2);
9     switch(shape)
10    {
11        case 'R':
12            area=side1*side2;
13            break;
14        case 'S':
15            area=side1*side2/2;
16            break;
17        case 'T':
18            area=side1*side2;
19            break;
20        default:
21            area=0;
22    }
23    printf("%d\n",area);
24    return 0;
25 }
```

	Input	Expected	Got
	T 10 20	200	200
	S 30 40	600	600
	B 2 11	0	0

REC-CIS

G
8
8

Sample Output 4

0

Sample Input

C
9
10

Sample Output 4

0

Explanation:

- First is output of area of rectangle
- Then, output of area of triangle
- Then output of area square
- Finally, something random, so we print 0

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
```

REC-CIS

	11			
R	300		300	
10				
30				
S	1000		1000	
40				
50				

Passed all tests!

Question 3

Correct

Marked out of 7.00

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Superman is planning a journey to his home planet. It is very important for him to know which day he arrives there. They don't follow the 7-day week like us. Instead, they follow a 10-day week with the following days: Day Number Name of Day 1 Sunday 2 Monday 3 Tuesday 4 Wednesday 5 Thursday 6 Friday 7 Saturday 8 Kryptonday 9 Coluday 10 Daxamday Here are the rules of the calendar: • The calendar starts with Sunday always. • It has only 296 days. After the 296th day, it goes back to Sunday. You begin your journey on a Sunday and will reach after n. You have to tell on which day you will arrive when you reach there.

Input format: •

Contain a number n (0 < n)

Output format: Print the name of the day you are arriving on

Example Input

7

Example Output

Kryptonday

Example Input

1

Example Output Monday

Answer: (penalty regime: 0 %)

```

1 #include <stdio.h>
2 int main()
3 {
4     int i,n;
5     scanf("%d",&n);
6     i=(n%296)%10;
7     switch(i)
8     {

```


Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2 int main()
3 {
4     int i,n;
5     scanf("%d",&n);
6     i=(n%296)%10;
7     switch(i)
8     {
9         case 0:
10            printf("Sunday\n");
11            break;
12         case 1:
13            printf("Monday\n");
14            break;
15         case 2:
16            printf("Tuesday\n");
17            break;
18         case 3:
19            printf("Wednesday\n");
20            break;
21         case 4:
22            printf("Thursday\n");
23            break;
24         case 5:
25            printf("Friday\n");
26            break;
27         case 6:
28            printf("Saturday\n");
29            break;
30         case 7:
31            printf("Kryptonday\n");
32            break;
33         case 8:
34            printf("coluday\n");
35            break;
36         case 9:
37            printf("Dexanday\n");
38            break;
39     }
40     return 0;
41 }
```

REC-CIS

```
15 case 2:
16     printf("Tuesday\n");
17     break;
18 case 3:
19     printf("Wednesday\n");
20     break;
21 case 4:
22     printf("Thursday\n");
23     break;
24 case 5:
25     printf("Friday\n");
26     break;
27 case 6:
28     printf("Saturday\n");
29     break;
30 case 7:
31     printf("Kryptonday\n");
32     break;
33 case 8:
34     printf("coluday\n");
35     break;
36 case 9:
37     printf("Dexamday\n");
38     break;
39 }
40 return 0;
41 }
```

	Input	Expected	Got	
	7	Kryptonday	Kryptonday	
	1	Monday	Monday	

Passed all tests!

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	Input	Expected	Got	
	25 53	false	false	
	27 77	true	true	

Passed all tests!

Question 2

Correct

Marked out of
5.00

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Objective

In this challenge, we're getting started with conditional statements.

Task

Given an integer, n , perform the following conditional actions:

- If n is odd, print **Weird**
- If n is even and in the inclusive range of 2 to 5, print **Not Weird**
- If n is even and in the inclusive range of 6 to 20, print **Weird**
- If n is even and greater than 20, print **Not Weird**

Complete the stub code provided in your editor to print whether or not n is weird.

Input Format

A single line containing a positive integer, n .

Constraints

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Question 1

Correct

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[Flag question](#)**Status** Finished**Started** Monday, 23 December 2024, 5:33 PM**Completed** Thursday, 7 November 2024, 9:01 AM**Duration** 46 days 8 hours

Write a program to read two integer values and print true if both the numbers end with the same digit, otherwise print false. Example: If 698 and 768 are given, program should print true as they both end with 8. Sample Input 1 25 53 Sample Output 1 false Sample Input 2 27 77 Sample Output 2 true

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int num1,num2;
5     scanf("%d",&num1);
6     scanf("%d",&num2);
7     int lastdigit1=num1%10;
8     int lastdigit2=num2%10;
9     if (lastdigit1==lastdigit2)
10    {
11
12        printf("true\n");
13    }
14    else
15    {
16        printf("false\n");
17    }
18 }
```

Input	Expected	Got

Sample Case 1: $n = 24$

$n > 20$ and n is even, so it isn't weird. Thus, we print **Not Weird**.

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int n;
5     scanf("%d",&n);
6     if (n%2==0)
7     {
8         printf("Not weird\n");
9     }
10    else
11    {
12        if(n>=2 && n<=5)
13        {
14            printf("weird\n");
15        }
16        else if (n>=6 && n<=20)
17        {
18            printf("weird\n");
19        }
20        else if (n>20)
21        {
22            printf("Not weird\n");
23        }
24    }
25    return 0;
26 }
```

	Input	Expected	Got	
	3	Weird	Weird	
	24	Not Weird	Not Weird	

Passed all tests!

REC-CIS

Constraints

$$1 \leq n \leq 100$$

Output Format

Print *Weird* if the number is weird; otherwise, print *Not Weird*.

Sample Input 0

3

Sample Output 0

Weird

Sample Input 1

24

Sample Output 1

Not Weird

Explanation

Sample Case 0: $n = 3$

n is odd and odd numbers are weird, so we print *Weird*.

Sample Case 1: $n = 24$

Question 3

Correct

Marked out of
7.00

Flag question

Three numbers form a Pythagorean triple if the sum of squares of two numbers is equal to the square of the third. For example, 3, 5 and 4 form a Pythagorean triple, since $3^2 + 4^2 = 25 = 5^2$. You are given three integers, a, b, and c. They need not be given in increasing order. If they form a Pythagorean triple, then print "yes", otherwise, print "no". Please note that the output message is in small letters. Sample Input 1 3 5 4 Sample Output 1 yes Sample Input 2 5 8 2 Sample Output 2 no

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int a,b,c;
5     scanf("%d %d %d",&a,&b,&c);
6     if(a*a + b*b==c*c)
7     {
8         printf("yes");
9     }
10    else if(b*b + c*c == a*a)
11    {
12        printf("yes");
13    }
14    else if(c*c+a*a==b*b)
15    {
16        printf("yes");
17    }
18    else
19    {
20        printf("no");
21    }
22    return 0;
23 }
```

	Input	Expected	Got
	3 5 4	yes	yes
	5 8 2	no	no

Passed all tests!

REC-CIS

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Completed	Thursday, 21 November 2024, 9:18 AM
Duration	32 days 8 hours

Question 1

Correct

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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

REC-CIS

7

Sample Output 2

Heptagon

Sample Input 3

11

Sample Output 3

The number of sides is not supported.

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int n;
5     scanf("%d",&n);
6     if(n>=3 && n<=10)
7     {
8         if(n==3)
9         {
10             printf("Triangle");
11         }
12         else if(n==4)
13         {
14             printf("Square");
15         }
16         else if(n==5)
17         {
```

```
35     }
36 }
37 else
38 {
39     printf("The number of sides is not supported.");
40 }
41 return 0;
42 }
```

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

REC-CIS

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

REC-CIS

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

REC-CIS

Sample Output 1

Monkey

Sample Input 2

2010

Sample Output 2

Tiger

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int y;
5     scanf("%d",&y);
6     if(y%12==8)
7     {
8         printf("dragon\n");
9     }
10    else if(y%12==9)
11    {
12        printf("shake\n");
13    }
14    else if(y%12==10)
15    {
16        printf("Horse\n");
17    }
18    else if(y%12==11)
19    {
20        printf("sheep\n");
21    }
22    else if(y%12==0)
23    {
```

REC-CIS

```
39 + {
40     printf("Rat\n");
41 }
42 else if(y%12==5)
43 + {
44     printf("0x\n");
45 }
46 else if(y%12==6)
47 + {
48     printf("Tiger\n");
49 }
50 else if(y%12==7)
51 + {
52     printf("Hare");
```

	Input	Expected	Got	
	2004	Monkey	Monkey	
	2010	Tiger	Tiger	

Passed all tests!

Question 3
Correct
Marked out of 7.00
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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:

REC-CIS

```
10     else if(y%12==9)
11     {
12         printf("shake\n");
13     }
14     else if(y%12==10)
15     {
16         printf("Horse\n");
17     }
18     else if(y%12==11)
19     {
20         printf("sheep\n");
21     }
22     else if(y%12==0)
23     {
24         printf("Monkey\n");
25     }
26     else if(y%12==1)
27     {
28         printf("rooster\n");
29     }
30     else if(y%12==2)
31     {
32         printf("Dog\n");
33     }
34     else if(y%12==3)
35     {
36         printf("pig\n");
37     }
38     else if(y%12==4)
39     {
40         printf("Rat\n");
41     }
42     else if(y%12==5)
43     {
44         printf("0x\n");
45     }
46     else if(y%12==6)
47     {
48         printf("Tiger\n");
49     }
50     else if(y%12==7)
51     {
52         printf("Hare");
```

REC-CIS

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 {
4     char r;
5     int c;
6     scanf("%c %d",&r,&c);
7     if(((r=='a' || r=='c' || r=='e' || r=='g') && (c%2!=0)) || ((r=='b' || r=='d' || r=='f' || r=='h') && (c%2==0)))
```


REC-CIS

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     char r;
5     int c;
6     scanf("%c %d",&r,&c);
7     if((((r=='a' || r=='c' || r=='e' || r=='g') && (c%2!=0)) || ((r=='b' || r=='d' || r=='f' || r=='h') && (c%2==0)))
8     {
9         printf("The square is black.");
10    }
11    else
12    {
13        printf("The square is white.");
14    }
15    return 0;
16 }
```

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!

Finish review