

Write a Python program solve the following problem.

Your program should ask the user for a month as a number between 1 and 12. The program should display a message indicating whether the month is in the first quarter, the second quarter, the third quarter, or the fourth quarter of the year.

Following are the guidelines:

- If the user enters either 1, 2, 3 or 4, the month is in the first quarter.
- If the user enters a number between 5 ,6 and 7, the month is in the second quarter.
- If the number is either 8 or 9, the month is in the third quarter.
- If the month is between 10, 11 and 12, the month is in the fourth quarter.
- If the number is not between 1 and 12, the program should display an error.

Screenshot of the source-code:

```
1  def main_901142():
2      # Ask input from user
3      entered_month_901142 = input("Enter a month between 1 and 12: ")
4
5      # Parse entered month into integer
6      parsed_month_901142 = int(entered_month_901142)
7
8      calculate_quarter_901142(parsed_month_901142)
9
10
11 # Determine in which quarter the entered month falls
12 def calculate_quarter_901142(month_901142):
13     # Check if the month falls under first quarter i.e. month is between 1 and 4
14     if month_901142 > 0 and month_901142 <= 4:
15         print(f"Month {month_901142} is in the first quarter.")
16     # Check if the month falls under second quarter i.e. month is between 5 and 7
17     elif month_901142 > 4 and month_901142 <= 7:
18         print(f"Month {month_901142} is in the second quarter.")
19     # Check if the month falls under third quarter i.e. month is either 8 or 9
20     elif month_901142 > 7 and month_901142 <= 9:
21         print(f"Month {month_901142} is in the third quarter.")
22     # Check if the month falls under fourth quarter i.e. month is between 10 and 12
23     elif month_901142 > 9 and month_901142 <= 12:
24         print(f"Month {month_901142} is in the fourth quarter.")
25     # Display error if invalid range is selected for months
26     else:
27         print("OOPS !, Invalid month range entered 😞\nPlease choose month between 1 to 12.")
28
29
30 # Call main method to execute the program
31 main_901142()
```

### Test case for month entered as 2:

```
assign2.py •
assign2.py > calculate_quarter_901142
1  def main_901142():
2      # Ask input from user
3      entered_month_901142 = input("Enter a month between 1 and 12: ")
4
5      # Parse entered month into integer
6      parsed_month_901142 = int(entered_month_901142)
7
8      calculate_quarter_901142(parsed_month_901142)
9
10 # Determine in which quarter the entered month falls
11 def calculate_quarter_901142(month_901142):
12     # Check if the month falls under first quarter i.e. month is between 1 and 4
13     if month_901142 > 0 and month_901142 <= 4:
14         print(f"Month {month_901142} is in the first quarter.")
15     # Check if the month falls under second quarter i.e. month is between 5 and 7
16     elif month_901142 > 4 and month_901142 <= 7:
17         print(f"Month {month_901142} is in the second quarter.")
18     # Check if the month falls under third quarter i.e. month is either 8 or 9
19     elif month_901142 > 7 and month_901142 <= 9:
20         print(f"Month {month_901142} is in the third quarter.")
21     # Check if the month falls under fourth quarter i.e. month is between 10 and 12
22     elif month_901142 > 9 and month_901142 <= 12:
23         print(f"Month {month_901142} is in the fourth quarter.")
24     # Display error if invalid range is selected for months
25     else:
26         print("OOPS !, Invalid month range entered 😞\nPlease choose month between 1 to 12.")
27
28 # Call main method to execute the program
29 main_901142()
30
```

COMMENTS PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
> python3 assign2.py
Enter a month between 1 and 12: 2
Month 2 is in the first quarter.
```

### Test case for month entered as 5:

```
assign2.py •
assign2.py > ...
1  def main_901142():
2      # Ask input from user
3      entered_month_901142 = input("Enter a month between 1 and 12: ")
4
5      # Parse entered month into integer
6      parsed_month_901142 = int(entered_month_901142)
7
8      calculate_quarter_901142(parsed_month_901142)
9
10 # Determine in which quarter the entered month falls
11 def calculate_quarter_901142(month_901142):
12     # Check if the month falls under first quarter i.e. month is between 1 and 4
13     if month_901142 > 0 and month_901142 <= 4:
14         print(f"Month {month_901142} is in the first quarter.")
15     # Check if the month falls under second quarter i.e. month is between 5 and 7
16     elif month_901142 > 4 and month_901142 <= 7:
17         print(f"Month {month_901142} is in the second quarter.")
18     # Check if the month falls under third quarter i.e. month is either 8 or 9
19     elif month_901142 > 7 and month_901142 <= 9:
20         print(f"Month {month_901142} is in the third quarter.")
21     # Check if the month falls under fourth quarter i.e. month is between 10 and 12
22     elif month_901142 > 9 and month_901142 <= 12:
23         print(f"Month {month_901142} is in the fourth quarter.")
24     # Display error if invalid range is selected for months
25     else:
26         print("OOPS !, Invalid month range entered 😞\nPlease choose month between 1 to 12.")
27
28 # Call main method to execute the program
29 main_901142()
30
```

COMMENTS PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
> python3 assign2.py
Enter a month between 1 and 12: 5
Month 5 is in the second quarter.
```

### Test case for month entered as 8:

```
assign2.py •
assign2.py > calculate_quarter_901142
1  def main_901142():
2      # Ask input from user
3      entered_month_901142 = input("Enter a month between 1 and 12: ")
4
5      # Parse entered month into integer
6      parsed_month_901142 = int(entered_month_901142)
7
8      calculate_quarter_901142(parsed_month_901142)
9
10 # Determine in which quarter the entered month falls
11 def calculate_quarter_901142(month_901142):
12     # Check if the month falls under first quarter i.e. month is between 1 and 4
13     if month_901142 > 0 and month_901142 <= 4:
14         print(f"Month {month_901142} is in the first quarter.")
15     # Check if the month falls under second quarter i.e. month is between 5 and 7
16     elif month_901142 > 4 and month_901142 <= 7:
17         print(f"Month {month_901142} is in the second quarter.")
18     # Check if the month falls under third quarter i.e. month is either 8 or 9
19     elif month_901142 > 7 and month_901142 <= 9:
20         print(f"Month {month_901142} is in the third quarter.")
21     # Check if the month falls under fourth quarter i.e. month is between 10 and 12
22     elif month_901142 > 9 and month_901142 <= 12:
23         print(f"Month {month_901142} is in the fourth quarter.")
24     # Display error if invalid range is selected for months
25     else:
26         print("OOPS !, Invalid month range entered 😞\nPlease choose month between 1 to 12.")
27
28 # Call main method to execute the program
29 main_901142()
30
```

COMMENTS PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
> python3 assign2.py
Enter a month between 1 and 12: 8
Month 8 is in the third quarter.
```

### Test case for month entered as 0:

```
assign2.py •
assign2.py > calculate_quarter_901142
1  def main_901142():
2      # Ask input from user
3      entered_month_901142 = input("Enter a month between 1 and 12: ")
4
5      # Parse entered month into integer
6      parsed_month_901142 = int(entered_month_901142)
7
8      calculate_quarter_901142(parsed_month_901142)
9
10 # Determine in which quarter the entered month falls
11 def calculate_quarter_901142(month_901142):
12     # Check if the month falls under first quarter i.e. month is between 1 and 4
13     if month_901142 > 0 and month_901142 <= 4:
14         print(f"Month {month_901142} is in the first quarter.")
15     # Check if the month falls under second quarter i.e. month is between 5 and 7
16     elif month_901142 > 4 and month_901142 <= 7:
17         print(f"Month {month_901142} is in the second quarter.")
18     # Check if the month falls under third quarter i.e. month is either 8 or 9
19     elif month_901142 > 7 and month_901142 <= 9:
20         print(f"Month {month_901142} is in the third quarter.")
21     # Check if the month falls under fourth quarter i.e. month is between 10 and 12
22     elif month_901142 > 9 and month_901142 <= 12:
23         print(f"Month {month_901142} is in the fourth quarter.")
24     # Display error if invalid range is selected for months
25     else:
26         print("OOPS !, Invalid month range entered 😞\nPlease choose month between 1 to 12.")
27
28 # Call main method to execute the program
29 main_901142()
30
```

COMMENTS PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
> python3 assign2.py
Enter a month between 1 and 12: 0
OOPS !, Invalid month range entered 😞
Please choose month between 1 to 12.
```