As seasons roll on by

Worked example .

This program accesses a list called days, which contains the names of days, to display two *specific* items (those with index 5 and 6).

|  |  |
| --- | --- |
| 1  2  3  4  5  6 | days = ["Monday", "Tuesday",  "Wednesday", "Thursday",  "Friday", "Saturday", "Sunday"]  print("These are the weekend days:")  print(days[5])  print(days[6]) |

Worked example .

This program accesses a list called days, which contains the names of days, to display the name of the current day and the day *before* that.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11  12 | days = ["Monday", "Tuesday",  "Wednesday", "Thursday",  "Friday", "Saturday", "Sunday"]   |  |  | | --- | --- | | print("What day is it today?")  day = int(input()) | Today as integer . |  |  |  | | --- | --- | | today = days[day] | Today . |  |  |  | | --- | --- | | if day > 0:  yesterday = days[**day-1**]  else:  yesterday = days[6] | Yesterday . |   print("Today it is", today)  print("Yesterday it was", yesterday) |

As seasons roll on by

Task 1 . Summer

**Step 1**

**Open** this **incomplete** program on Bourne to Learn:

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9 | months = ["January", "February",  "March", "April", "May",  "June", "July", "August",  "September", "October", "November",  "December"]  print("These are the summer months:")  print(months[ ])  print(months[ ])  print(months[ ]) |

**Step 2**

**Complete** lines 7, 8, and 9 with an integer (number), so that the program displays the names of the summer months. The summer months are June, July and August so work out the index numbers like you did with the days of the week previously (**Thursday** was **3,** **Friday** was **4, Saturday** was **5,** etc.)

**Tip:** You are used to numbering months starting from 1 for January. However, **list items in Python are numbered starting from 0**. You need to take that into account.

Task 2 . A name for a number

**Step 1**

**Open** this **incomplete** program on Bourne to Learn:

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  10 | months = ["January", "February",  "March", "April", "May",  "June", "July", "August",  "September", "October", "November",  "December"]  print("What month is it? (1-12)")  month = int(input())  print("It is", months[ ]) |

**Step 2**

**Complete** line 10 with an expression, so that the program displays the name of the current month. Work out which of options below will work. If you enter **1** it should return **January**

1. month + 1
2. month - 1
3. month \* 1

**Tip:** You are used to numbering months starting from 1 for January. However, **list items in Python are numbered starting from 0**. You need to take that into account.

|  |  |
| --- | --- |
| **Example** |  |
| Note: Use this example to check your program. Given the input you see in this sample interaction, this is the output your program should produce. | |
| The program displays a prompt and waits for keyboard input. | What month is it? (1-12) |
| The user types a reply. | 1 |
| The program displays the name of the month. | It is January |

Task 3 . Seasons

**Step 1**

**Open** this **incomplete** program on Bourne to Learn:

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11  12  13 | seasons = ["Winter", "Spring",  "Summer", "Autumn"]  print("What month is it? (1-12)")  month = int(input())  if month <= 2 or month == 12:  season = 0  elif :  season = 1  elif :  season = 2  else:  season = 3  print("It is", seasons[season]) |

**Step 2**

**Complete** lines 7 and 9 with a Boolean expression (a condition) that checks the value of the month variable and assigns an appropriate value to season. Entering month 12, 1, or 2 will display “It is Winter”

Line 5 is **already** **completed** so use this to help complete lines 7 and 9.

**Tip:** The numbering of seasons is arbitrary. Looking at the seasons list, numbering ranges from 0 for winter to 3 for autumn.

Explorer task . The actual month

Instead of asking the user to type the current month, the program can retrieve the actual month, using the datetime module.

**Replace** the lines that receive user input (marked with -) with the lines that retrieve the current month (marked with +).

|  |  |
| --- | --- |
| -  - | print("What month is it? (1-12)")  month = int(input()) |
| +  + | from datetime import datetime  day = datetime.now().month |

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