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, so that the program displays the names of the summer months.

**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. This is the output your program should produce. | |
| The program displays the names of the summer months. | These are the summer months:  June  July  August |

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.

**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 |

|  |  |
| --- | --- |
| **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. | 12 |
| The program displays the name of the month. | It is December |

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 :  season = 0  elif :  season = 1  elif :  season = 2  else:  season = 3  print("It is", seasons[season]) |

**Step 2**

**Complete** lines 5, 7, and 9 with a Boolean expression (a condition) that checks the value of the month variable and assigns an appropriate value to season.

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

**Tip:** The condition required in line 5 should check the month variable, to determine if it corresponds to a winter month (season 0). The numbers for winter months are not consecutive (1, 2, and 12), so you will need to use or in the condition.

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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