Computing

Lesson 4: Selection Challenge

Programming Part 2: Selection

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[1] *Materials from the Teach Computing Curriculum created by the National Centre for Computing Education*

Scenario

The Joke Machine is a program that tests your skills in joke punchlines. It gives you the opening line to a joke and you must guess the punchline. If you are correct then you win a point!

Use the jokes provided to make a program that will:

- Include an introduction to the game
- Tell the start of a joke
- Allow the user to guess the punchline
- Check if the user is correct
  - If the user is correct they gain a point
  - Provide feedback if they guess correctly
  - Provide feedback if they are incorrect
- Reveal the final score at the end

Jokes

What is pink and fluffy?

Pink fluff

What is brown and sticky?

A brown stick

What is black and white and red all over?

A newspaper

Task 1 - Introductions

Tick ✓ off the sub-tasks as you go:

- [ ] Write text that will output a message that introduces the user to the game. It could include a title and some simple instructions.
- [ ] Use the print statement to display this text to the user.
- [ ] Test your code.

Sample code block:

```
print("Guess the punchline...")
```

Common errors (use this checklist to help you fix debug your code):

- ❏ Capital P used for print
- ❏ Brackets missing from start or end of text
- ❏ Speech marks missing from start or end of text

Task 2 - Asking for the punchline

Tick ✓ off the sub-tasks as you go:

- [ ] Write the opening statement to the first joke
- [ ] Create a variable to hold the user's guess
- [ ] Decide if you want the data to be converted to uppercase or lowercase and use the appropriate function for this
- [ ] Write an if statement that includes a condition to check if their punchline guess is correct
- [ ] Provide some text to display if they are correct
- [ ] Test your code.

Task 2 - Asking for the punchline

Sample code block:

```
print("Here is the start of my joke")
punchline = input().upper()
if punchline == "THE PUNCHLINE":
  print("Well done, you were correct!")
```

Common errors (use this checklist to help you fix debug your code):

- ❏ Uppercase `I` is used for `if`
- ❏ One = sign is used instead of ==
- ❏ Colon `:` missing at the end of the `if`
- ❏ Indents/spaces have been missed
- ❏ Quotations missed around the punchline in the condition
- ❏ Punchline in the condition is written in uppercase but `.lower()` has been used

Task 3 - Keeping score

Tick ✓ off the sub-tasks as you go:

- [ ] Create a variable to track the score
- [ ] Initialize the variable at the top of the code `score = 0`
- [ ] Increment the score within the if statement `score = score + 1`
- [ ] Test your code by placing `print(score)` on a new line

NOTE: Delete the `print(score)` line of code once testing is complete

Common errors (use this checklist to help you fix debug your code):

- ❑ Score hasn't been initialised at the top of the code
- ❑ Incorrect spelling of score variable
- ❑ Score hasn't been incremented in the correct place (it should be directly underneath the well done statement, inside the if statement)

Task 4 - Feedback for if they are correct

Tick ✓ off the sub-tasks as you go:

- [ ] Add an `else:` underneath the `if`
- [ ] Add a print statement that provides feedback on the joke
- [ ] Test your code

Sample code block:

```
else:
  print("Wrong, it was this punchline")
```

Common errors (use this checklist to help you fix debug your code):

- ❏ Else has a capital E
- ❏ Colon : missing after the else
- ❏ Print statement not indented
- ❏ Else isn’t inline with the if

Task 5 - Adding more jokes

Tick ✓ off the sub-tasks as you go:

- [ ] Double check that your code is working correctly. It should give feedback if they are correct or incorrect. Execute the program to check this, try each scenario.
- [ ] Add **two** new jokes to the program
- [ ] Make sure that you test regularly

Common errors (use this checklist to help you fix debug your code):

- ❏ Indents in the wrong place (refer back to your original working code block to check if you indents are lined up)
- ❏ Colons missing
- ❏ Capital letters used at the start of key terms: `else`, `if`, `print`

Task 6 - Revealing the final score

Tick ✓ off the sub-tasks as you go:

- [ ] Use a print statement to reveal the final score to the user
- [ ] Test your code

Common errors (use this checklist to help you fix debug your code):

- ❏ `score = score + 1` has not been correctly placed inside each if
- ❏ Incorrect spelling of `score` variable