**Assignment 3 - Serial Position Effect**

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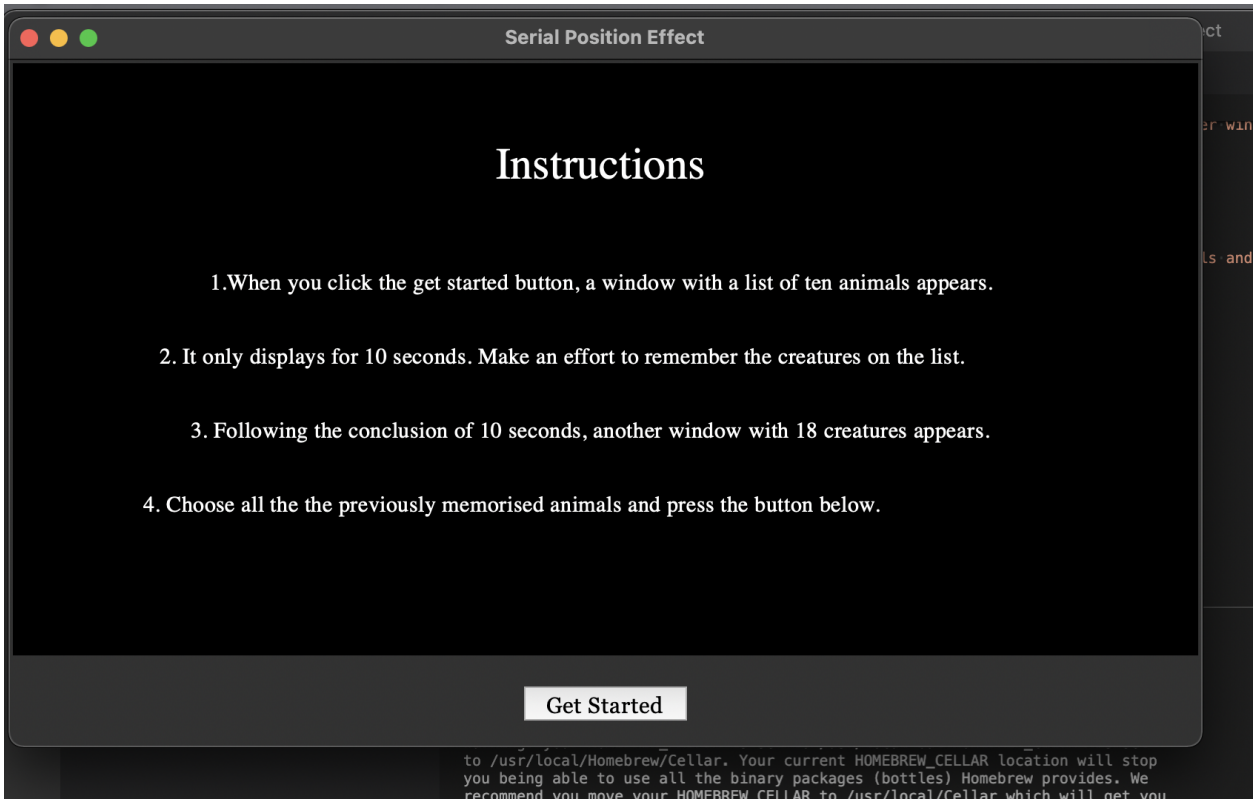
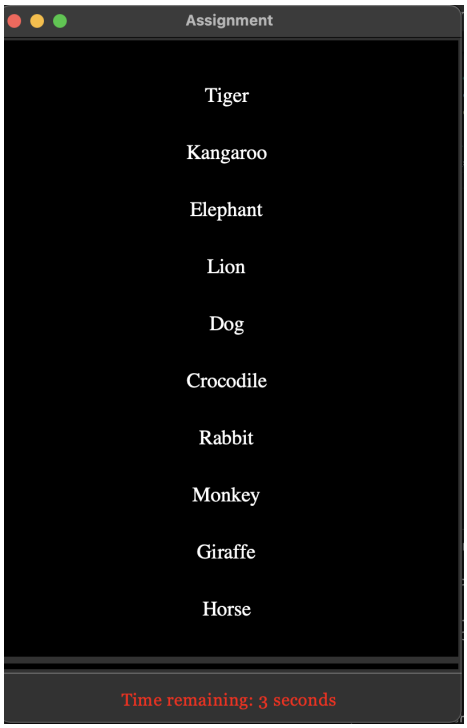
I have created a GUI which display's 10 animals for 10 seconds. There will be a countdown timer for the user's reference. After that the user will be directed to a new window where he has to select the animals that appeared in the previous window. The order of selection wouldn't matter. The user will be presented 18 choices to choose from. If the user selects less or more than 10 animals, an alert box pops asking the user to choose exactly 10 animals. Then the user will be given a score out of 10, indicating the number of animals he recalled correctly.

Starting window explaining all the rules:

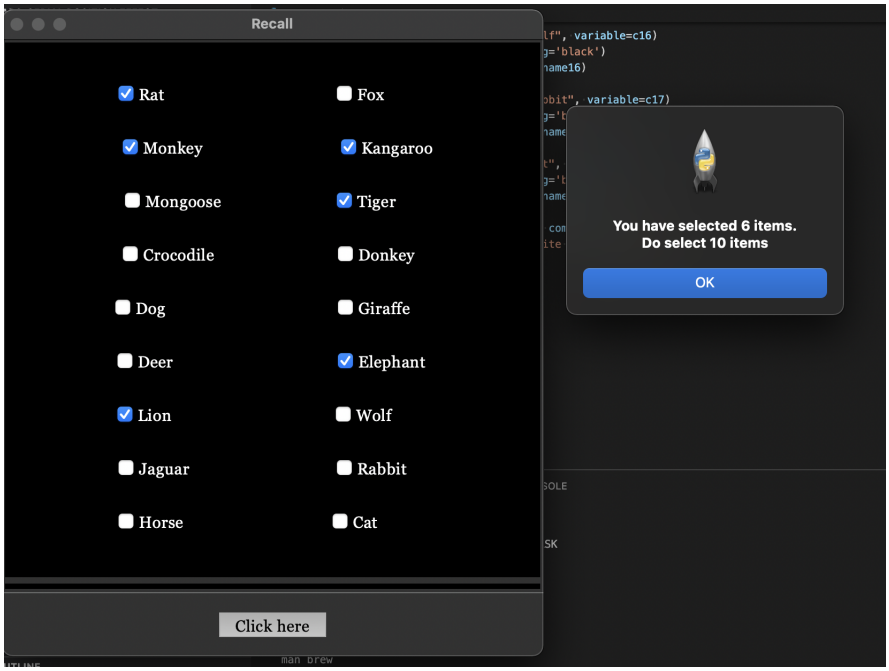


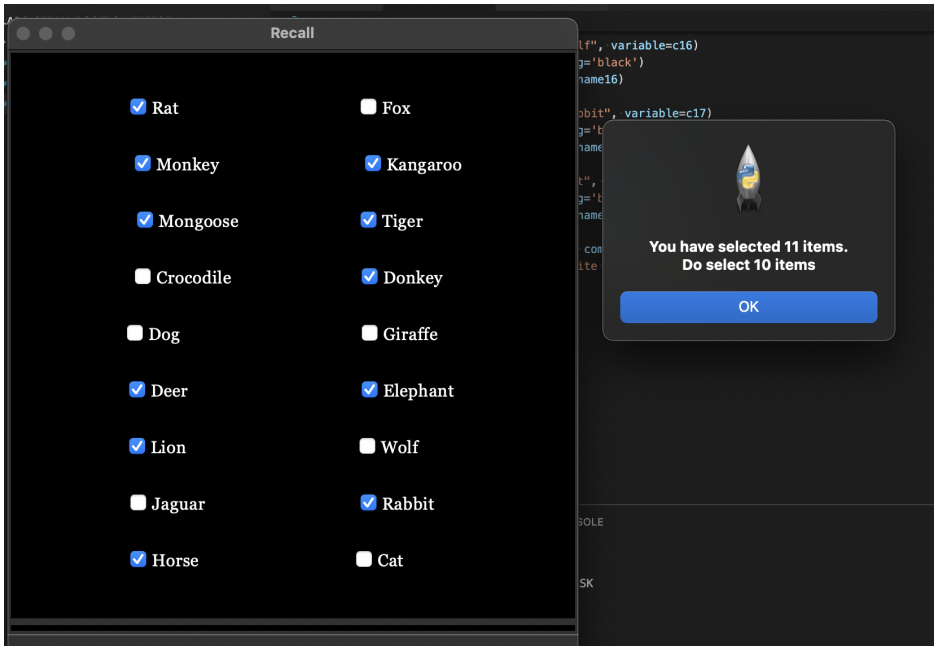

After the display of animals, I have noted down the time taken by different users to recall the animals. Also for a particular word in the list, I have observed and noted the how the position of the word affects the outcome.
I have also noted down a favourite animal of all users and noted down the change in outcome wrt to other animals.

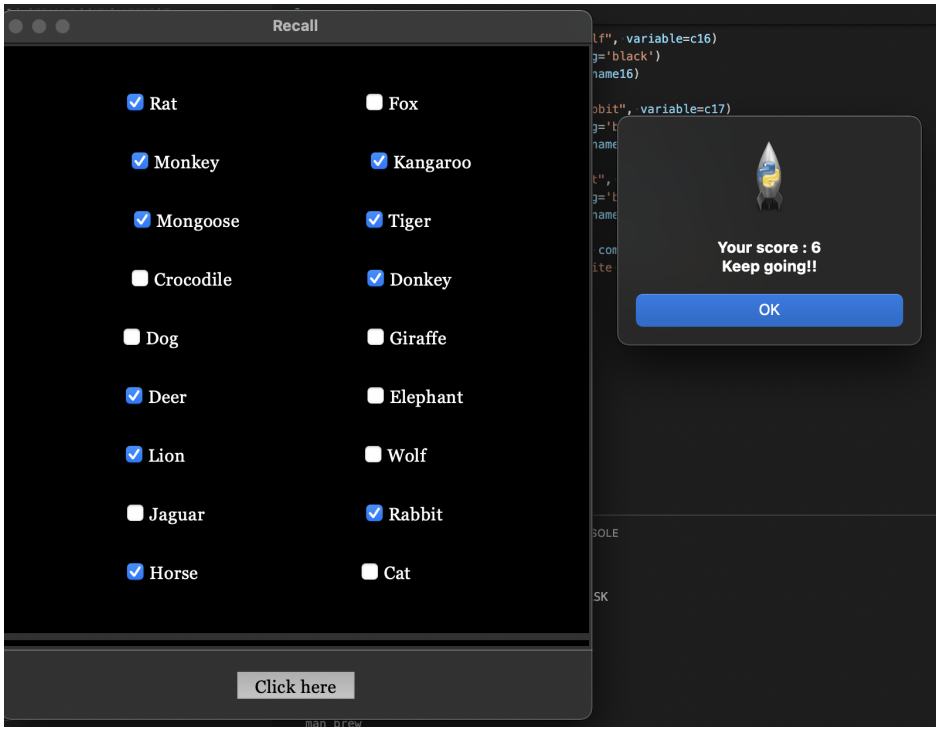
Window displaying all the 10 animals users need to memorise and a countdown timer counting down from 10 to 0.




Users now have the liberty to take any amount of time for selecting the animals and the time is measured and noted. Appropriate alerts shown on submitting.




Recall
Rat
Fox
Monkey
Kangaroo
Mongoose
Tiger
Crocodile
Donkey
Dog
Giraffe
Deer
Elephant
Lion
Wolf
Jaguar
Rabbit
Horse
Cat
You have selected 11 items.
Do select 10 items
OK


Recall
Rat
Fox
Monkey
Kangaroo
Mongoose
Tiger
Crocodile
Donkey
Dog
Giraffe
Deer
Elephant
Lion
Wolf
Jaguar
Rabbit
Horse
Cat
Click here
Your score : 6
Keep going!!
OK

**Observations:**
I) If the user was successfully able to recall the presence of their favourite animal from the list.

| Test Subject No | Favourite Animal | Successfully recalled its presence? |
|---|---|---|
| 1 | Tiger | Yes |
| 2 | Lion | Yes |
| 3 | Horse | No |
| 4 | Tiger | Yes |
| 5 | Fox | No |
| 6 | Lion | Yes |
| 7 | Jaguar | Yes |
| 8 | Dog | Yes |
| 9 | Lion | Yes |
| 10 | Fox | Yes |
| 11 | Dog | Yes |
| 12 | Tiger | Yes |
| 13 | Tiger | Yes |
| 14 | Lion | Yes |
| 15 | Horse | Yes |

Frequency = 13/15 = 0.867

**Users were able to successfully recall the presence of their favourite animal with a frequency of 86.7%.**

II) I have positioned **Crocodile** at the start of the list (position 1 - 3) and noted down if users recalled

| **Test Subject No** | **Successfully recalled its presence?** |
|---|---|
| 1 | No |
| 2 | Yes |
| 3 | Yes |
| 4 | Yes |
| 5 | Yes |
| 6 | Yes |
| 7 | Yes |
| 8 | Yes |
| 9 | Yes |
| 10 | Yes |
| 11 | No |
| 12 | Yes |
| 13 | Yes |
| 14 | Yes |
| 15 | No |

Frequency = 12/15 = 0.80

**Users were able to successfully recall the presence of “crocodile” when it was in the beginning of the list with a  frequency of 80%.**

Words early in the list were put into long term memory (primacy effect) because the person has time to rehearse each word acoustically. This could be the reason why users tend to remember an animal specifically when it was put at the start of the list.

III) I have positioned **Crocodile** at the middle of the list (position 4 - 8) and noted down if users recalled

| **Test Subject No** | **Successfully recalled its presence?** |
|---|---|
| 1 | No |
| 2 | No |
| 3 | No |
| 4 | Yes |
| 5 | No |
| 6 | Yes |
| 7 | No |
| 8 | No |
| 9 | No |
| 10 | Yes |
| 11 | No |
| 12 | No |
| 13 | Yes |
| 14 | No |
| 15 | No |

Frequency = 4/15 = 0.267

**Users were able to successfully recall the presence of “crocodile” when it was in the middle of the list with a  frequency of 26.7%.**

Words in the middle of the list had been there too long to be held in short term memory (STM) (due to displacement) and not long enough to be put into long term memory (LTM). This is referred to as an asymptote. This finding was formally first stated by Murdock.

IV) I have positioned **Crocodile** at the end of the list (position 9-10) and noted down if users recalled

| Test Subject No | Successfully recalled its presence? |
|---|---|
| 1 | Yes |
| 2 | Yes |
| 3 | Yes |
| 4 | Yes |
| 5 | No |
| 6 | Yes |
| 7 | Yes |
| 8 | No |
| 9 | Yes |
| 10 | Yes |
| 11 | Yes |
| 12 | Yes |
| 13 | Yes |
| 14 | No |
| 15 | Yes |

Frequency = 13/15 = 0.867
**Users were able to successfully recall the presence of "crocodile" when it was at the end of the list with a  frequency of 86.7%.**

According to Murdock, words from the end of the list went into short term memory (recency effect) and hence users tend to remember it easily.

**Conclusion:**

- Regardless of where it was on the list, the majority of users were able to recollect their favourite animal.
- Users are more likely to remember the first few things on a list than the middle parts (Primacy effect).
- Users are more likely to remember the list's last few items than the list's middle parts (Recency effect).
- Users remember the list's beginning and ending elements more frequently than the list's middle element.