

IT351 Assignment 3

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TOPIC: SERIAL POSITION EFFECT

Serial Position Effect:

The serial position effect states that humans have the tendency to remember the start or the end items in a list rather than the middle of the list. Serial position effect has two major concepts, namely, recency effect and primacy effect.

Primacy Effect: According to this rule, humans have a tendency to remember items which are present at the beginning of a list due to how humans recall from memory.

Recency Effect: This states that items recently viewed have more chance of being recalled.

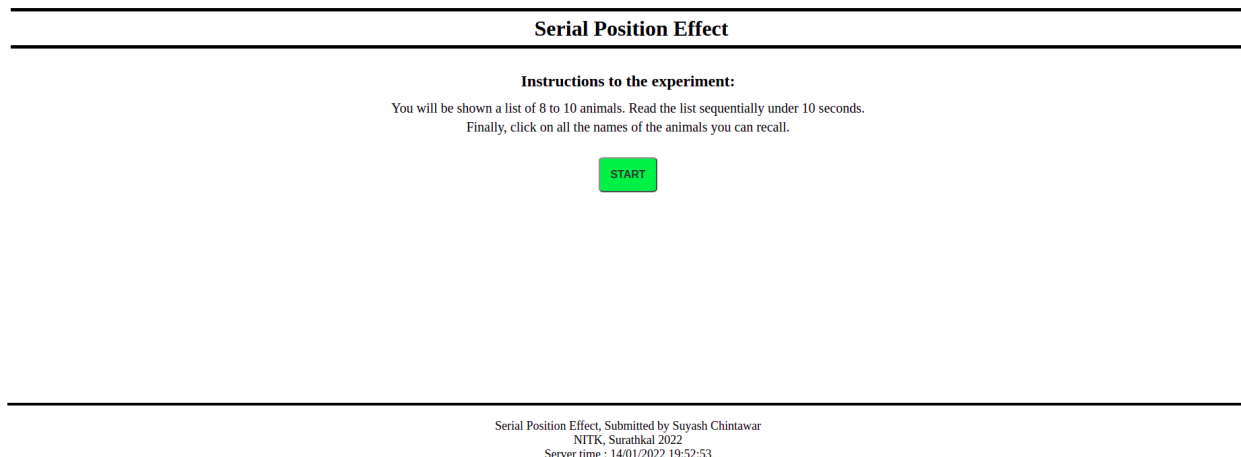
Rendering the web application:

Download and unzip “code.zip”. Open “home.html”.

The Experiment:

- 1) The first page displays basic information and instructions needed to simulate the experiment.
- 2) After hitting the start button, a timer of 10 seconds starts where the user must memorize as many animals as possible.
- 3) The user must then select all items that he/she remembers on the next page in under 20 seconds.
- 4) The final score and the recall accuracies for the beginning, middle and end positioned items will be displayed.

Screenshots of the web application:



The home page above has some basic instructions needed to carry out the experiment.

Serial Position Effect

Memorize as many animals as you can!

Kangaroo
Lion
Leopard
Fox
Deer
Goat
Monkey
Cat
Tiger
Hamster

Remaining time: 5 seconds

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Server time : 14/01/2022 20:04:11

After starting the experiment, a list of 10 animals chosen at random is shown and the user must memorize them in under 10 seconds.

Serial Position Effect

Click on all the animals your remember!

Bear
Cat
Kangaroo
Hamster
Goat
Donkey
Zebra
Turtle
Leopard
Camel
Deer
Horse
Lion
Fox
Cow
Rabbit
Giraffe
Tiger
Monkey
Dog

Remaining time: 2 seconds

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The user then clicks on a maximum of 10 animals of the complete list of 20 animals as he/she recalls. The items turn green on clicking. The user must complete this activity before the 20-second timer expires.

Serial Position Effect

Congratulations! You completed the experiment!

You identified 7/10 animals correctly!

Recall(%) of beginning of list: 100%

Recall(%) of middle of list: 50%

Recall(%) of end of list: 66.6666666666667%

You tend to remember words at the start of the list!

RESTART

Serial Position Effect, Submitted by Suyash Chintawar
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Finally the user is shown the score and analysis. The analysis contains the recall accuracies calculated based on the correctly identified items. Three recall accuracies have been calculated for the beginning, middle and end of the list. This 10-item list is divided as follows, the beginning includes the first 3 items, whereas the middle and end includes 4 and 3 items respectively.

Graph:

This experiment was performed by 10 different users and the recall accuracies for each of the three categories for every user was tabulated as given in the table below.

TABLE: Recall accuracies in each of the categories for different users.

	User 1	User 2	User 3	User 4	User 5	User 6	User 7	User 8	User 9	User 10
Category 1	1.00	0.66	1.00	0.66	0.33	0.66	1.00	1.00	1.00	0.66
Category 2	0.50	0.25	1.00	0.25	0.00	0.50	0.50	0.75	0.50	0.75
Category 3	0.66	1.00	1.00	0.66	0.66	0.33	0.33	1.00	0.33	0.66

NOTE:

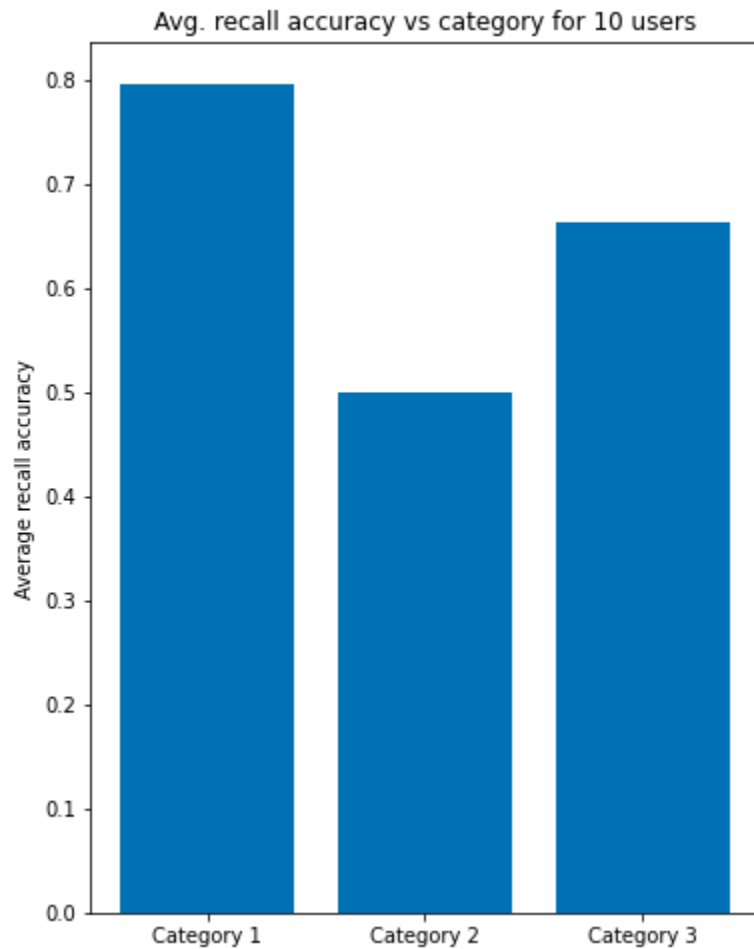
The categories are:

Category 1: Items 1,2,3 of the list.

Category 2: Items 4,5,6,7 of the list.

Category 3: Items 8,9,10 of the list.

The graph of the average recall accuracy per category across users is plotted as below.



Observations and Conclusion:

From the above experiment, we saw that the items in the beginning of the list are easier to remember followed by the items at the end and finally the middle items. Even though, there may be a chance that the user may be able to remember the middle elements as well. This may be due to the fact that the user is familiar with the animal name.

THANK YOU