PART A

(PART A: TO BE REFFERED BY STUDENTS)

Experiment No.02

Implementation of basic design interfaces

A.1 Aim:

1. Evaluate interaction rules by preforming tasks using virtual HCI lab.

2. Apply suitable web-based technology to implement web page design interfaces using following concepts
   i. Tables
   ii. Colors
   iii. Icon
   iv. Where and what things should be placed

A.2 Prerequisite:

Students should have knowledge about Fitts law to understand other laws

Understanding of basic knowledge of HTML and CSS

A.3 Outcome:

After successful completion of this experiment students will be able to

1. You can apply Law in designing and placing widgets on computer interface.
2. Create a website
3. Apply bad and good interface on a website

A.4 Theory:

Design a bad interface of any website by misplacing the following things:

- Colours
- Icon
- Where and what things should be placed etc.

A.5. Procedure:

Task I:

Perform following activities **thrice** to plot graph

- Go to: https://www.iitg.ac.in/cseweb/vlab/creative-design-prototyping/Fitts_simulator.html

follow the Procedure, plot a graph for time taken by entire process and analyze it by giving your user experience.

- Go to https://www.iitg.ac.in/cseweb/vlab/creative-design-prototyping/webers_simulator.html

follow the instruction, record the reading, and plot graph. analyze it by giving your user experience.

- Go to https://www.iitg.ac.in/cseweb/vlab/creative-design-prototyping/Hick_simulator.html

follow instructions, calculate RT plot graph. analyze it by giving your user experience.

Task II

a) Explore any website and design two linked webpages of similar website using (WordPress or HTML/CSS) which includes
   - **Visibility of System Status**
   - **Consistency**
   - **Recognition and Feedback**

b) Compare your designed pages with existing website pages in terms of good and bad design interfaces (paste the screenshot wherever is applicable)
c) Observe the webpages and comment because bad interface is not required
d) Save and close the file and name it as **EXP2_ your Roll no.**

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(PART - B)

(TO BE COMPLETED BY STUDENTS)

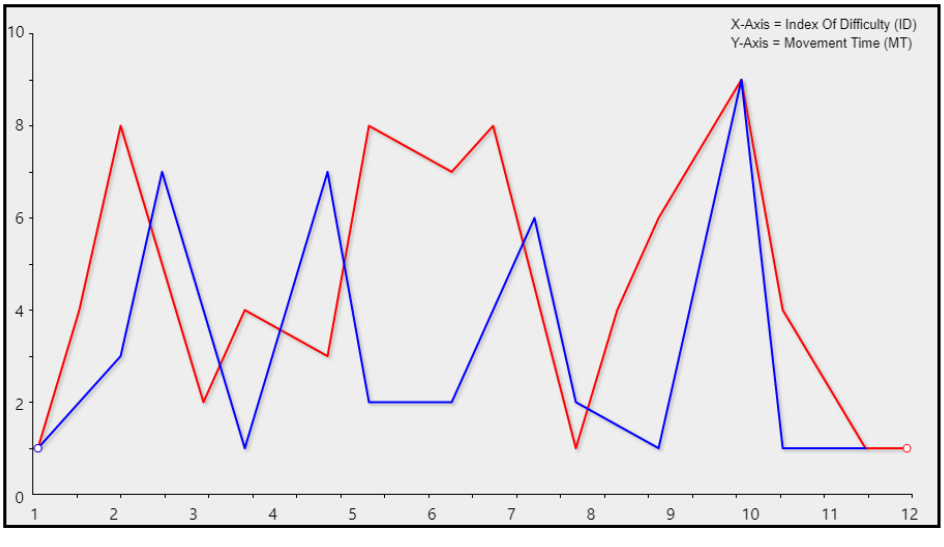
(Students must submit the soft copy as per following segments within two hours of the practical. The soft copy must be uploaded on the Blackboard or emailed to the concerned lab in charge faculties at the end of the practical in case there is no Black board access available)

Roll. No.: A016, A018, A022	Name: Varun K, Simran K, Kartik P
Sem/Year: VII/4	Batch: 1
Date of Experiment: 12/08/2022	Date of Submission: 12/08/2022
Grade --	

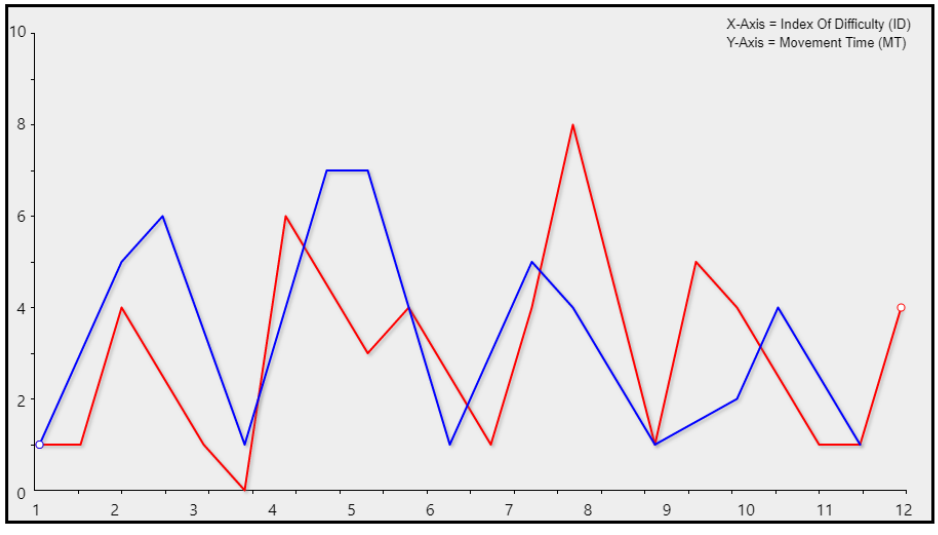
B.1: Input and Output:

Task one

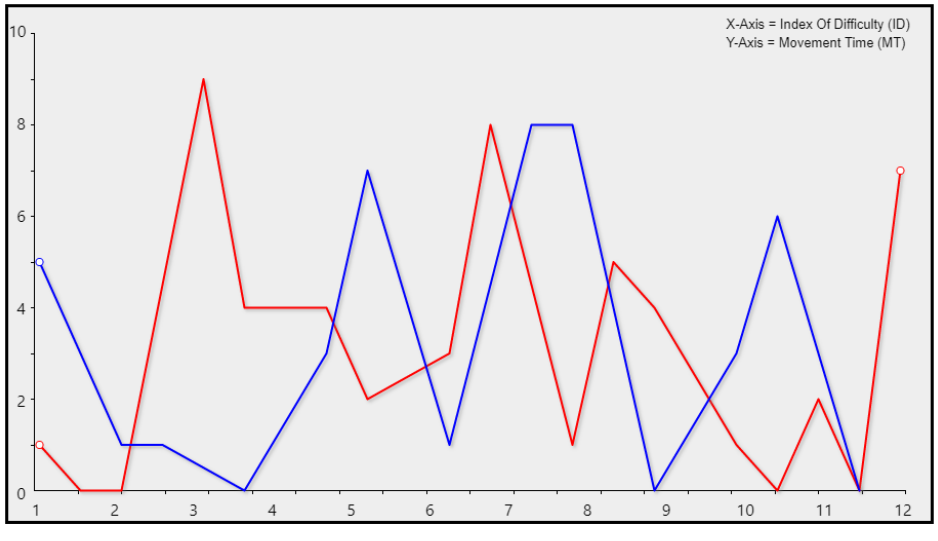
- Fitts Law



Distances	Times	Diameters
0	1.37	148
298	1.72	24
190	2.62	38
390	1.91	78
269	1.49	146
209	1.54	94
174	0.65	116
360	3.22	20
364	2.38	118
236	0.69	142
506	1.57	64
55	0.11	134
387	1.10	118
338	1.19	58
110	0.76	36
149	1.83	48
486	1.15	20
468	1.38	94
167	2.06	46
313	1.37	126
150	0.67	132
328	1.03	52



Distances	Times	Diameters
0	1.56	114
316	1.77	106
377	1.54	34
266	1.24	148
299	1.41	154
203	0.88	134
392	1.09	86
182	1.00	24
263	1.80	90
421	2.06	46
183	0.64	130
237	2.19	80
601	2.51	50
289	1.01	60
273	1.77	130
458	1.98	74
265	1.11	32
294	1.94	124
492	2.68	36
306	1.04	46
24	0.29	110
214	1.05	72



Distances	Times	Diameters
0	5.11	100
53	0.37	94
109	1.88	42
21	0.36	38
69	0.17	154
100	0.68	102
361	1.90	78
151	1.00	116
68	0.26	134
222	2.32	52
124	0.79	72
44	0.53	40
91	0.66	120
294	3.74	20
11	1.78	140
170	1.08	134
203	1.19	158
86	0.56	92
228	2.34	46
207	2.43	66
176	1.80	36
375	2.32	102

From the Analysis we found out that the accuracy varies from person to person and computer to computer since in the first graph we see that its response time is more as the pc we used is not known and we do not have a grip on it.

- Weber's Law

1st Experiment

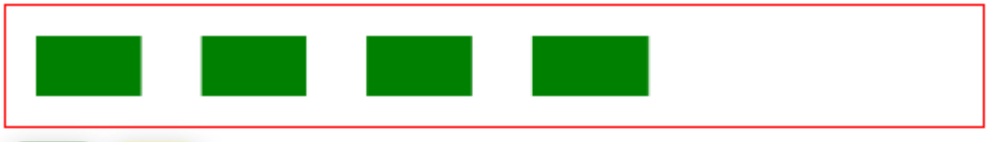
Spot expanding box and double click

Note : It will not work for single click, as it will give wrong information

Note : use start only once at a time till you reset.

Instructions

1. You will see 6 blue colored rectangular blocks on the screen.
2. Your time will start after you press "START" button.
3. Observe all blocks minutely and identify the one that expands in breadth after some time.
4. The moment you observe the difference click on the same block to stop the timer.
5. Record the time and the % noticed difference or the % area difference.
6. Repeat the steps 1-5 and plot the graph between '% area difference' Vs 'number of attempts'.
7. To repeat the same experiment first reset the timer by pressing "RESET" button.



start reset

11 s

A=34t+5600
A=5974
..A..diff..%=6.68

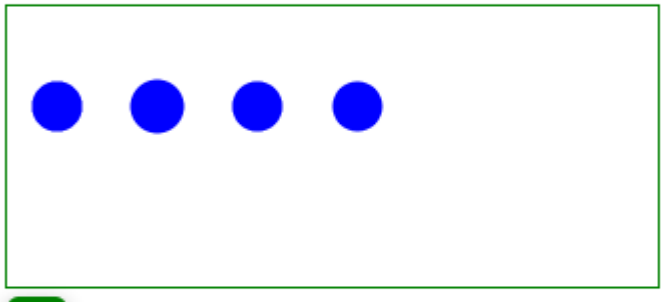
2nd Experiment

Spot expanding box and double click

Note : It will not work for single click, as it will give wrong information

Instructions

1. You will see 6 black colored circles on the screen.
2. Your time will start after you press "START" button.
3. Observe all circles minutely and identify the one that expands in radius after some time.
4. The moment you observe the difference click on the same circle to stop the timer.
5. Record the time and the % noticed difference or the % area difference.
6. Repeat the steps 1-5 and plot the graph between '% radial difference' Vs 'number of attempts'.
7. To repeat the same experiment first reset the timer by pressing "RESET" button.



start

reset

7 s

A=34t+5600
A=5838
..A..diff..%=4.25

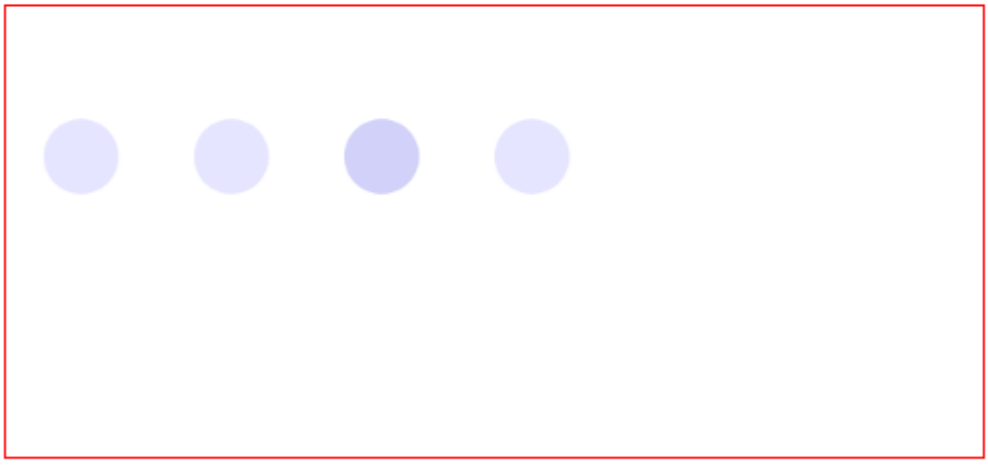
3rd Experiment

Spot expanding box and double click

Note : It will not work for single click, as it will give wrong information

Instructions

1. You will see 6 black colored circles.
2. Your time will start after you press "START" button.
3. Observe all circles minutely and identify the one that changes color after some time.
4. The moment you observe the difference click on the same circle to stop the timer.
5. Record the time and the % noticed difference or the % color difference.
6. Repeat the step 1-5 and plot the graph between '% color difference' Vs 'number of attempts'.
7. To repeat the same experiment first reset the timer by pressing "RESET" button.



From the image above we can infer that our reaction time differs from image to image, color to color and shape to shape, if the color of shape is like the color of the background, we can see that it depends on the stimulus of the person.

- Hick Men's Law

1. Do you see a box with a button in it below?
2. See the instruction in its below.
3. Execute the intstruction.
4. Repeat the same for next 10 consecutive instructions.
5. When you are done,your reaction times that were logged will be displayed.

Click Anywhere on the the screen to show values of time.

No of Buttons:	**Time(in secs)**
Starting:	1.06
1:	0.384
2:	1.264
5:	2.687
8:	1.934
8:	2.328
9:	7.111
5:	2.143
9:	2.776
9:	3.807
10:	2.863
:	undefined

1. Do you see a box with a button in it below?
2. See the instruction in its below.
3. Execute the intstruction.
4. Repeat the same for next 10 consecutive instructions.
5. When you are done,your reaction times that were logged will be displayed.

Click Anywhere on the the screen to show values of time.

No of Buttons:	**Time(in secs)**
Starting:	1.539
1:	0.854
2:	1.089
5:	1.726
8:	3.096
8:	2.543
9:	3.366
5:	2.337
9:	3.261
9:	2.608
10:	5.518
:	undefined

1. Do you see a box with a button in it below?
2. See the instruction in its below.
3. Execute the intstruction.
4. Repeat the same for next 10 consecutive instructions.
5. When you are done,your reaction times that were logged will be displayed.

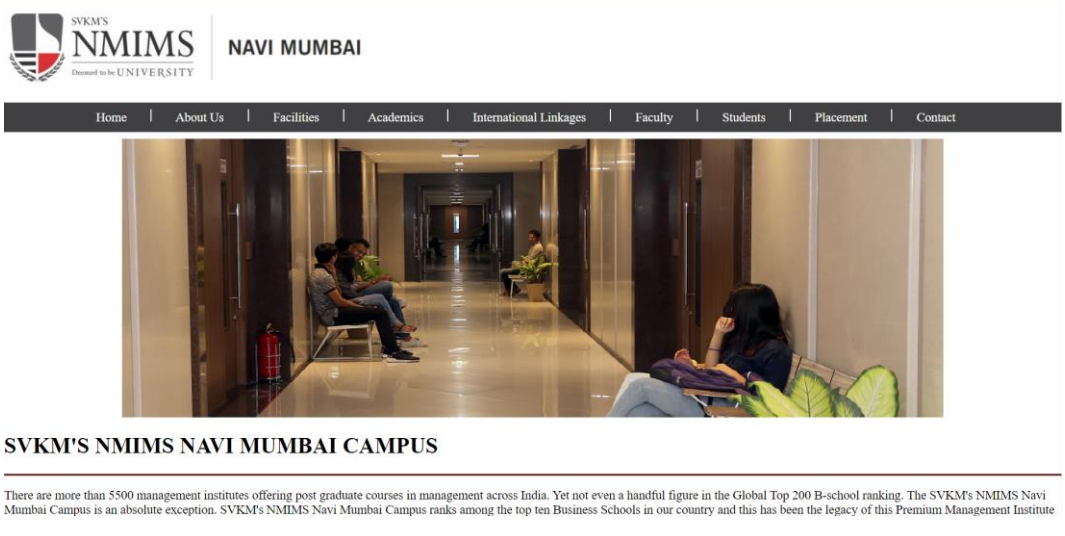
Click Anywhere on the the screen to show values of time.

No of Buttons:	Time(in secs)
Starting:	0.938
1:	0.528
2:	1.279
5:	3.888
8:	6.826
8:	3.329
9:	3.92
5:	2.216
9:	1.663
9:	2.231
10:	2.393
:	undefined

From the Hick Men's Law, we can infer that more the number of circles is more confuse the person is and since the colors are from the same spectrum, we can infer that the response time decreases from it since it becomes difficult by the user to recognize the color faster.

Task 2

Bad Design:

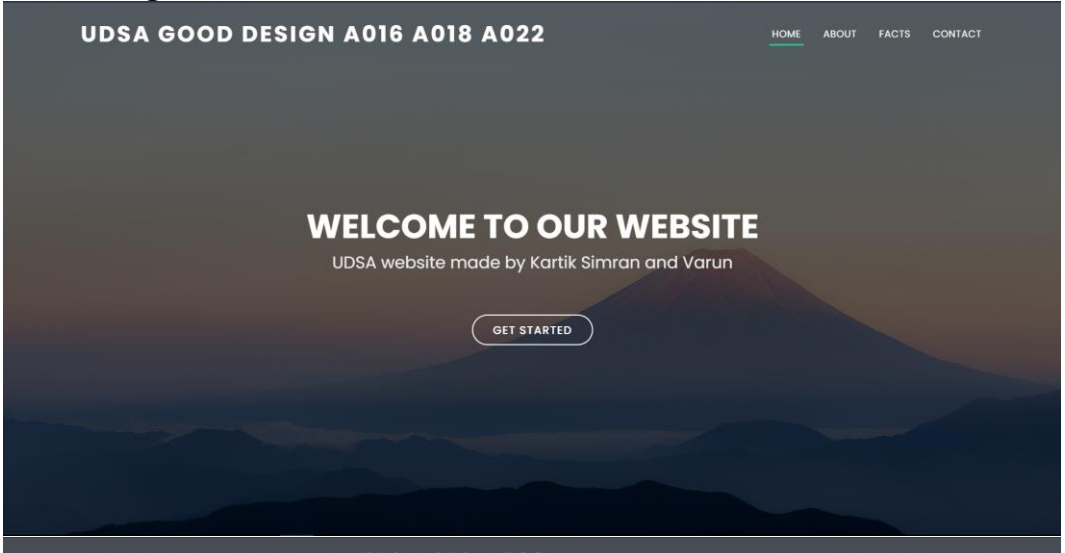


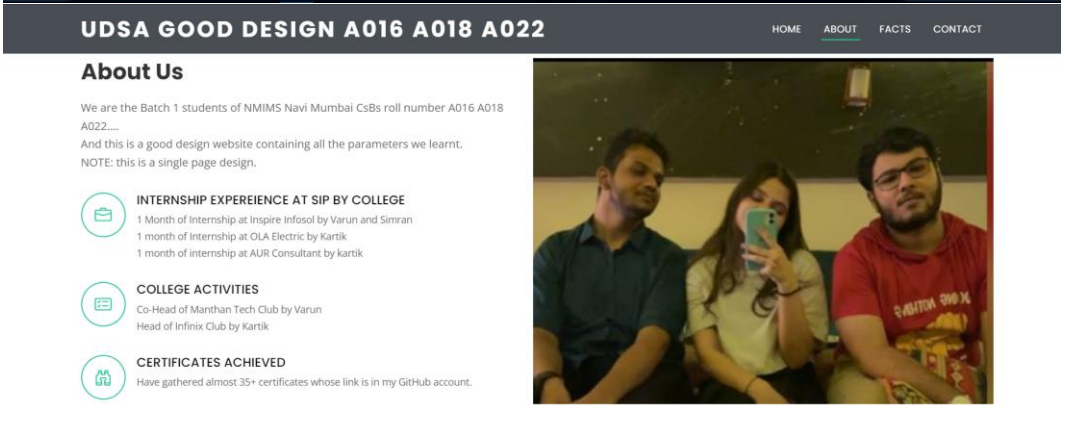
Mumbai Campus is an absolute exception. SVKM's NMIMS Navi Mumbai Campus ranks among the top ten Business Schools in our country and this has been the legacy of this Premium Management Institute for decades.

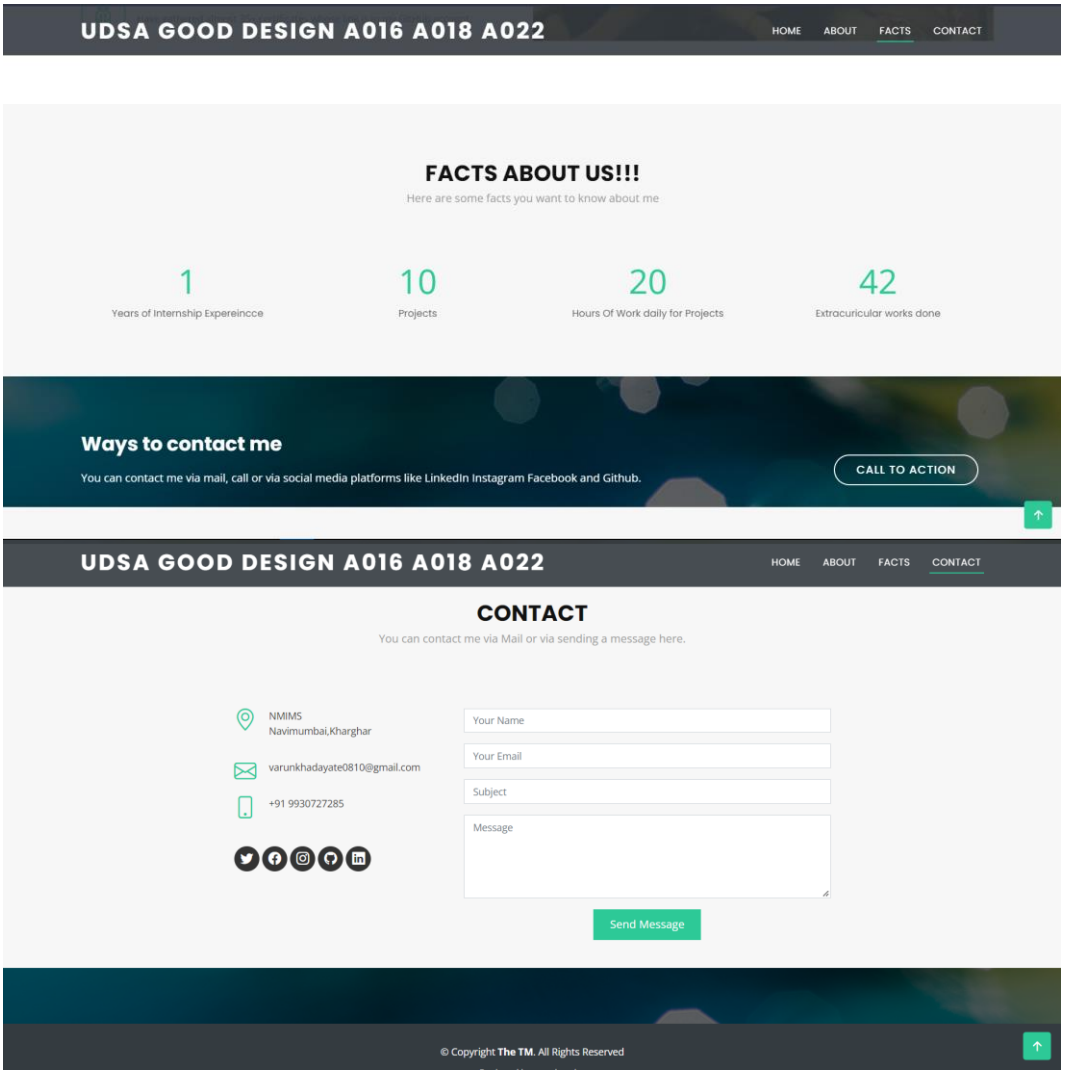
NMIMS has over the last 35 years grown from a management institute offering a single product namely MBA education to a Deemed to be University offering multiple products through separate schools in Business Management, Pharmacy, Technology Management & Engineering, Hospitality, Architecture, Science, Commerce, Economics and Law. In addition to recognising seeing the need for specialist schools in varied disciplines at the headquarters in Mumbai, the parent body has also responded to the felt need for centres of excellence across the country, thereby widening the base of quality higher education. It is with this objective that we set up campuses at Shirpur, Bangalore, Hyderabad, Indore, Navi Mumbai and Dhule. SVKM's NMIMS has established its Navi Mumbai campus to develop students into global organizational leaders who can create wealth for their organizations. The new campus at Navi Mumbai offers MBA. The admission process for the MBA is through the "NMAT" by GMAC examination followed by Group Discussion and Personal Interview.

The SVKM's NMIMS Navi Mumbai Campus is located in a natural scenic serene environment which provides an ideal atmosphere for pursuing higher education programs in management away from the noise and pollution of a metro city. SVKM's NMIMS Navi Mumbai Campus provides an idyllic environment to engage in learning and the unique distinction of gaining ringside insight to metropolitan corporate dynamics against a budding and emerging business hub.

Good Design:







- Comparison of your webpage with existing webpages in terms of good and bad designing interface
  The Bad Design had no order in which data is displayed. Footer at the bottom has no meaning and arrangement and the links on it redirect to error page. There is no such specification stating that the text has a link attached to it. In the header part where all the links and dropdowns for the navigation are to be placed, the cursor turns to a click pointer, but no feedback is received on clicking.

  In the good design, there are animations and colour that are soothing to the eye. All the information is orderly mentioned. The navigation bar follows towards the end of page so that the user can have navigating guidance all the time. In the contact section if any data field is empty or any data is wrongly given it gives an error while submitting. The header in navigation leads to respective section of the website making the navigation much easier and smooth.

B.2: Observations and Learning's:

(Students are expected to comment on the output obtained with clear observations and learning for each task/ sub part assigned)

We were able to find out our observation from the 3 laws above mainly Fitts, Weber's and Hick Man's Law and were able to do the analysis on good and bad design samples made by us.

B.3: Conclusion:

(Students must write the conclusion as per the attainment of individual outcome listed above and learning/observation noted in section B.2)

Hence, we were able to perform the experiment successfully.