

## Question Number 1

Q#1

Norman's model of interaction stages.

- ① Establish the goal
- ② Forming the intentions
- ③ specification the action sequence
- ④ Execution the action
- ⑤ perceiving the systems state
- ⑥ Intercepting the system state
- ⑦ Evaluating the system state, w.r.t. the goals and intentions

Entities:  
There will be two entities, Student and flex student.

~~Establish a goal~~

I want to see my marks on the flex of the quiz, then the very important and we have to login to the system successfully. Then the goal will be to login the system to view the quiz marks.

- ① Goal  
To login the system
- ② Forming the intentions.  
My intention will be open the laptop/mobile google type flex student and then entered the valid username and password to login.

### ③ Specifying the action sequence.

I will get up and will go to computer table and sit on the chair  
→ open the laptop →  
Enter the password to login into the computer →  
click on the google chrome → type on the search bar → flex student  
→ And entered press → then click on the username  
→ and enter username → and then password → finally entered press.

### ④ Executing the action

Executing the actions means enter the username and password and then entered.

## Now Evaluation Phase

### ⑤ Perceiving the system state.

My intention was when I press enterend it must go into the dashboard if I entered valid and there is no load on the flex server it will be login. So, I am waiting login or not.

### ⑥ Interpreting the system state.

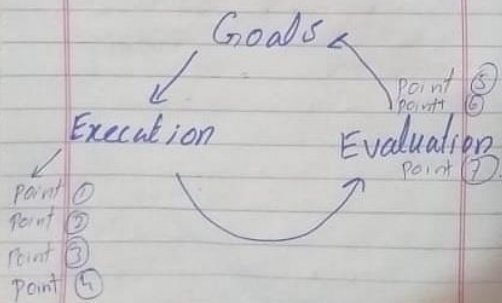
There could be two possibilities that either I entered valid login details then it will login →

\* If there is some wrong in the system or login details then I have to make new goal to fix this one.



## ⑦ Evaluating the system state;

At step six successfully login then the goal achieve, and I will search where is mark icon and press there, if I could not found that then it this the gulf of evaluation.



## Abowd and Beale

### Articulation:

To view the marks it must be login to the system, my articulation about the goal that I want to login.

Enter user name after opening the flex student and password to login And press enter button.

### Performance:

The system evaluate it self what the user wants to do the user wants to login and system validate username and password and login if username and password are validated

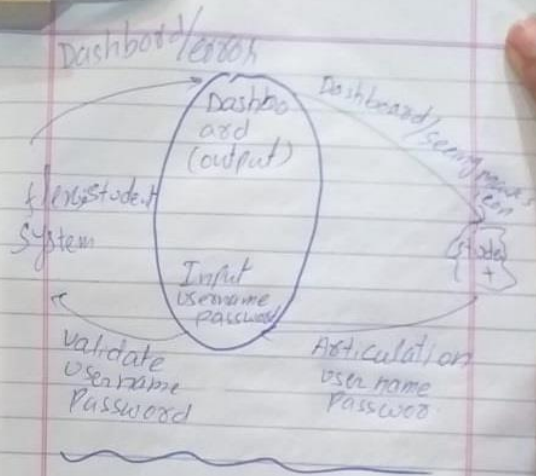
otherwise give error.

### Presentation:

If user successfully login the system presents the dashboard of the student |

### Observation:

The the user successfully login to the flex and presents the icon for marks | the goal achieved successfully, otherwise user again articulate with new input.



## Question Number 2

Q#2

## Gulf of execution:

Difference between the user formulation of actions to reach goal and actions allowed by system. Whatever the actions from the system, which are the actions allowed by the systems corresponds to those actions intended by the user, then the gulf of execution ~~must~~ very small and very effective system. The aim of minimized the gulf execution must be in system.

## Gulf of evaluation:

It is the distance between the physical presentation of system <sup>state</sup> and expectation of the users.

When the actions are performed then we match the output



of next state with ~~all~~  
user expectations, the distance  
between the presentation and  
user expectation is known  
as gulf of evaluation.

(b)

Direct ~~Menu~~

① Driving an automobile

Menu accessed by pointing at  
menu icon.

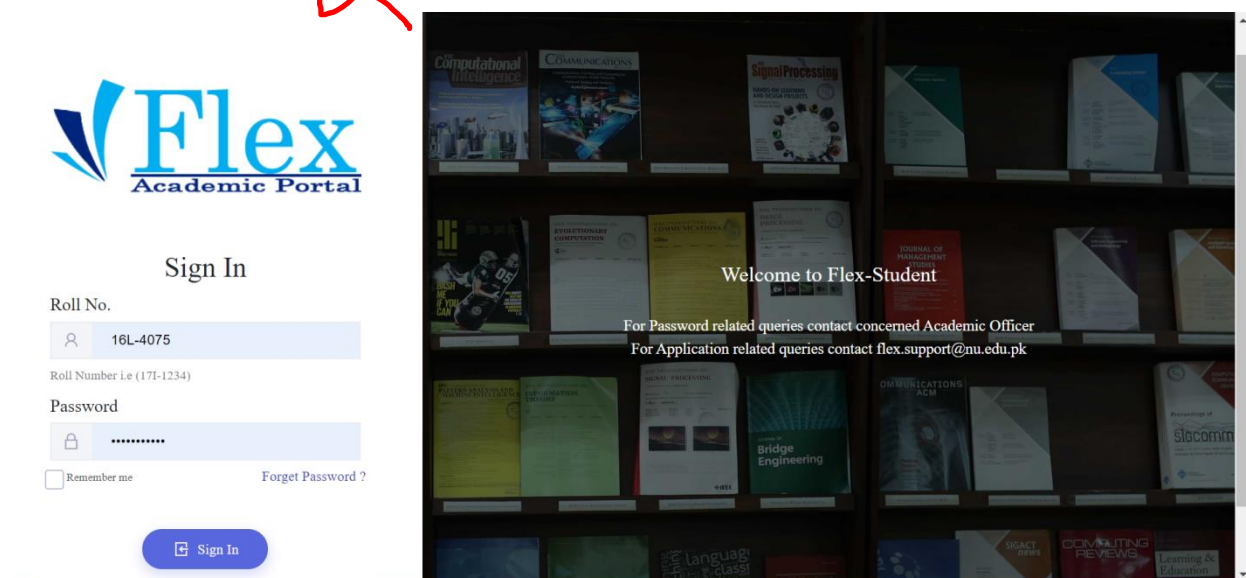
② Indirect

Select a menu from  
the list of textual  
list of operations.

### Question Number 3

#### Strive for Consistency:

However the login details as given in the screenshot like roll number and password, remember me, forget password and login button are all consistent. But It can be more better normally the login details entered on right side or middle of the page positioning somehow have little problem.



The image shows a login form for the Flex Academic Portal on the left and a background image of a bookshelf on the right. The login form includes the following elements:

- Flex Academic Portal** logo
- Sign In** heading
- Roll No.** label with a text input field containing **16L-4075**
- Roll Number i.e (17I-1234)** label
- Password** label with a text input field containing **\*\*\*\*\***
- ☐ **Remember me** checkbox
- [Forget Password ?](#) link
- Sign In** button

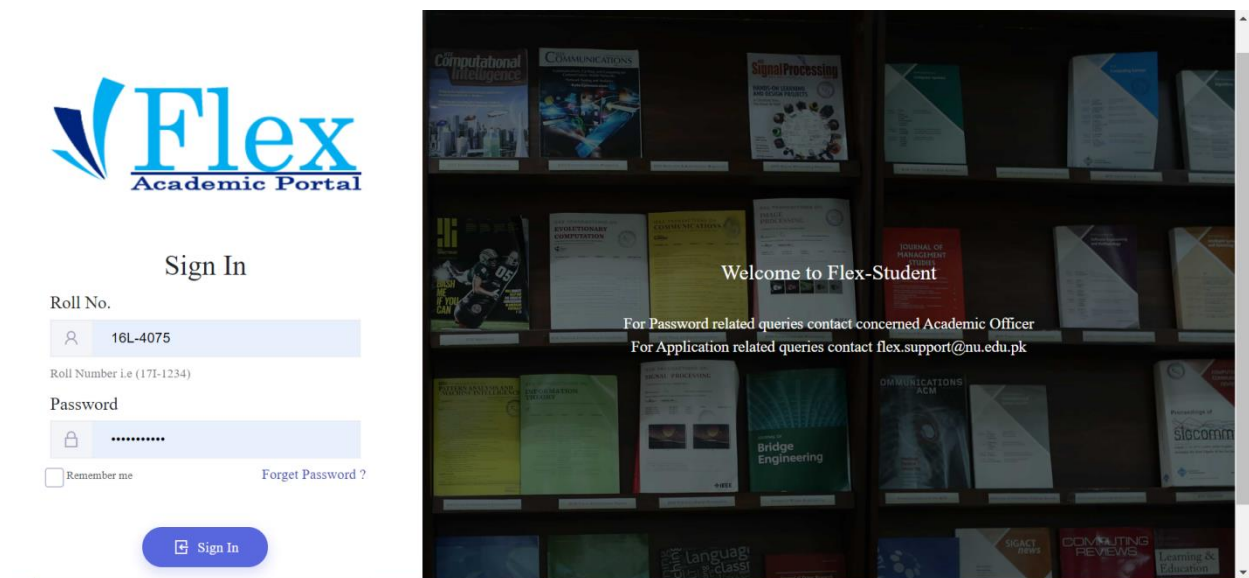
The background image shows a bookshelf with various books. Overlaid on the bookshelf is the text:

- Welcome to Flex-Student**
- For Password related queries contact concerned Academic Officer**
- For Application related queries contact [flex.support@nu.edu.pk](mailto:flex.support@nu.edu.pk)**



## Enables users to use shortcuts

First time you have to save login details later on there is option to remember me and just click on the button or press from the keyboard.



The image shows the login interface of the Flex Academic Portal. On the left, the portal's logo is displayed above a 'Sign In' section. This section includes input fields for 'Roll No.' (containing '16L-4075') and 'Password' (masked with dots). Below the password field are checkboxes for 'Remember me' and a link for 'Forget Password?'. A blue 'Sign In' button is at the bottom. On the right, a bookshelf background features a 'Welcome to Flex-Student' message and contact information for password and application queries.

**Flex Academic Portal**

**Sign In**

Roll No.  
16L-4075

Roll Number i.e (17I-1234)

Password  
\*\*\*\*\*

☐ Remember me [Forget Password ?](#)

[Sign In](#)

**Welcome to Flex-Student**

For Password related queries contact concerned Academic Officer  
For Application related queries contact [flex.support@nu.edu.pk](mailto:flex.support@nu.edu.pk)

## Informative Feedback:

It is showing informative feedback where you are right now.

Flex Student

flexstudent.nu.edu.pk/Student/Attendance?semid=20201

Apps 10 Best Children an... MafiaShare.net - bu... Search » Scriptgate... New Tab FriendsHI5 - Next G... Sett

Flex

Home

Semester Result Choice

Course Registration

Attendance Home > Attendance Feedback informative

Spring 2020

Registered Courses

CS303-Software Engineering Attendance Percentage:

Lecture No	Date	Duration (In H
------------	------	----------------

## Dialogue to yield closure:

The screenshot telling dialogue telling how many courses has been registered, and if failed the course you must take that course, these example of dialogue between user and system.

Course Registration							
Sr.#	Course Name	Cr.Hrs	Relation	Comments	Status	Section	
1	CS422-Human Computer Interaction	3	Core	Register! 1-Failed Course (Must Take)	Registered	BCS-6A	
2	CS449-Professional Issues in IT	3	Core	Register! 5-New Offered Course <New> (Recommended)	Registered	BCS-8D	
3	CS303-Software Engineering	3	Core	Register! 8-Improvement Course (Can take)	Registered	BCS-8A	

## Offer Simple error handling:

If user entered wrong login details. It shows the login details are invalid.

**Sign In**

Incorrect Roll No. Or Status Not  
Current

✕

Roll No.

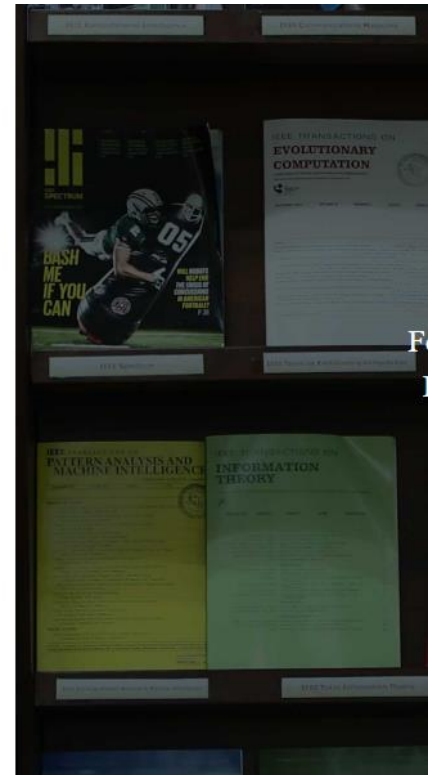
 16L-40

Roll Number i.e (17I-1234)

Password

 .....

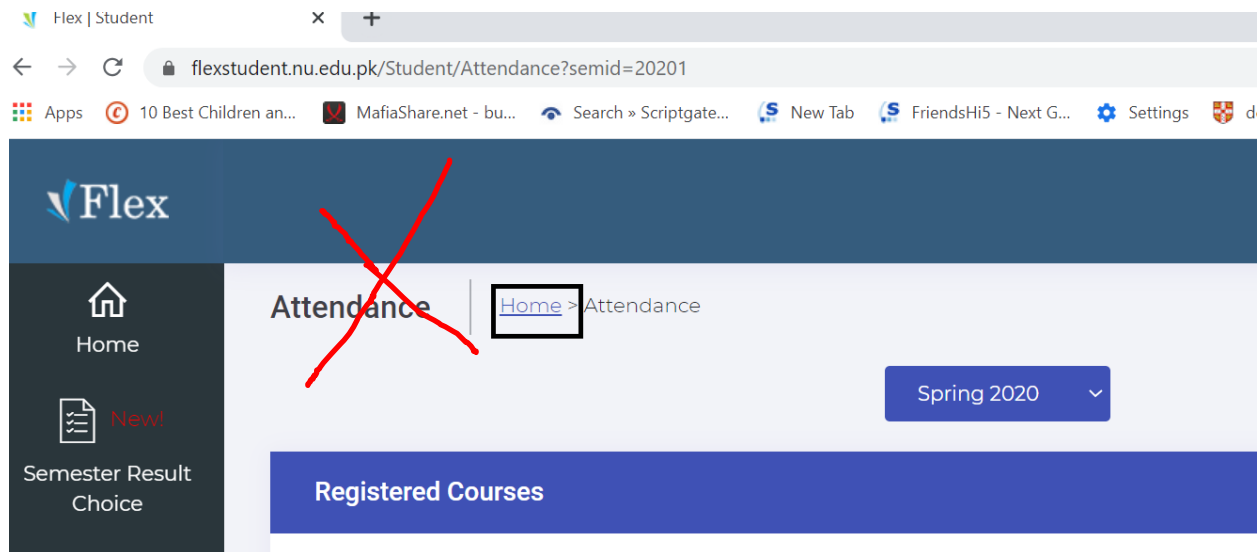
☐ Remember me [Forget Password ?](#)



## Easy Reversal of actions:



Easy reversal to home page where are you come from anywhere.



### **Internal Locus of control:**

Sometimes faced to problem sudden from the system, which is unexpected to the user. But overall the system is under control to students. They can perform whatever it the student done not system itself.

### **Short Term Memory Load:**

In whole when the semester Cgpa goes very low it show red

sign which recognition from the system that it is dangerous for me, and as well as in the attendance case. Which in our memory all show from it red means dangerous. So new things in system which unrecognized. Like in screenshot red sign on 78% attendance.

Spring 2020			
Registered Courses		CS303	CS
CS303-Software Engineering		Attendance Percentage:	78.00%
Lecture No	Date	Duration (In Hours)	Presence
1	20-Jan-2020	1.50	P
2	22-Jan-2020	1.50	P
3	27-Jan-2020	1.50	L
4	29-Jan-2020	1.50	P

## Question Number 4

①

Q# 4.

Login

Password

USERNAME  
E

Button

L16-4075, Password: 1234

Simple steps:

HPBHKKKKKK

HPBHKKKKHPB.

Heuristic of placing M.

Apply Rule 0.

HMPMBHMKMKMK

MKMKMKMK

HMPMBHMKMKMK

MK HMPMBR.

Apply Rule 1, 2.



$\bar{H} \bar{M} \bar{P} \bar{B} \bar{H} \bar{M} \bar{K} \bar{K} \bar{K} \bar{K} \bar{K} \bar{M} \bar{K}$   
 $\bar{H} \bar{M} \bar{P} \bar{B} \bar{H} \bar{M} \bar{K} \bar{K} \bar{K} \bar{M} \bar{K}$   
 $\bar{H} \bar{M} \bar{P} \bar{M} \bar{B} \bar{R}$

$T_{\text{execution}} =$

$$\begin{aligned}
 &0.4 + 1.35 + 1.1 + 0.2 + 0.4 + 1.35 \\
 &+ 0.2 + 0.2 + 0.2 + 0.2 + 0.2 + \\
 &0.2 + 1.35 + 0.2 + 0.4 + 1.35 \\
 &+ 1.1 + 0.2 + 0.4 + 1.35 + 0.2 + \\
 &0.2 + 0.2 + 0.2 + 1.35 + 0.2 \\
 &+ 0.4 + 1.35 + 1.1 + 1.35 + 0.2 \\
 &+ 1.5 =
 \end{aligned}$$

20.6  
sec

Ans  
=

(b)

(b) slate:

To see new assignment  
After login done.

Start → Mental →  
(H) Move Hand to mouse →  
Mouse to icon → click →  
Mouse to icon →

B (click)

The login has been  
done already just  
to see is there any  
assignment (new).

→ N → H → P → B →

To go assignment tab (P) → M →

B →

= N H P M B P M B

Rule 0:

= N H M P M B M P M B

= 174 MB MB MB MB  
MB

$$T_{exe} = 1.35 + 0.4 + 1.35 + 1.1 + \\ 1.35 + 0.2 + 1.35 + \\ 1.1 + 1.35 + 0.2 + 2R$$

$$T_{execution} = 9.75 + 2(1.5)$$

$$T = 9.75 + 3$$

$$T_{execution} = 12.75 \text{ sec}$$



## **Question Number 5**

### **Natural Language**

Combination of Command Line, Questions Answer, Form filling and menus these are good for the natural language.

### **Three- Dimensional Interface:**

Graphical Direct manipulation, in this type.

### **Touch:**

Use for menu, because user will select list of items or selection from multiple. Mac

## Question Number 6

### Importance of CIA:

CIA is important because in CIA, we observe what the ordinary user will do with the system, and how to do, what will be the procedure to do tasks, and what will be the emotionally related patience, emotions, and which users use the system and how they perform and what is the way the current state how they are doing. This is the step by step user tasks. And user is very important.

(b Part)

We will miss pattern Behaviour of the user and their physical way

to complete task.  
Emotions will block.  
You are making the  
product or system for  
user and we can not  
ignore it, there might  
be possible most chances  
fail the product.

### Example

NOKIA MOBILES  
PHONE MANUFACTURERS.

They have sometime  
high value in market  
but now they having  
declined all the products.