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Project Tasks

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Task 1

1. techniques and methods for gathering and analysing user feedback
2. 2 websites similar to community portal
    1. Visit
    2. Use
    3. record your experiences.
    4. **general user response from one other user**

Task 2

1. Discuss, study and analyse the user experience based on the observations
2. Study the experience for 2 to 3 scenarios

Task 3

Identify the performance levels and gaps between user experience in the study & desired user experience.

Task 4

Develop & document 3 metrics to measure the user experience

Task 5

1. Wireframes
2. Persona

Task 6

1. Create the steps in User Interaction process for various scenario.
2. Create a flow chart for user interaction.

Task 7

1. Create a Prototype for the proposed system, with at least 5 screens

Task 7

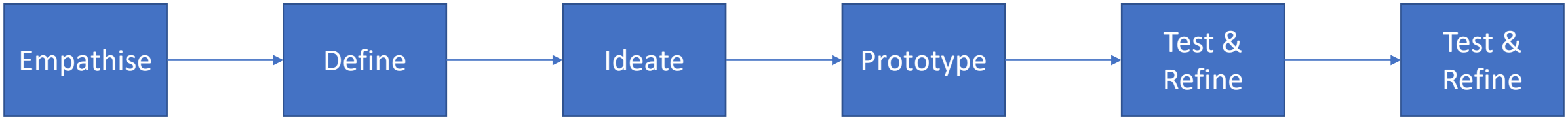
Get the user response (Mentor) and classify them to various types **using hieuristics**

Task 8

1. Demonstrate and let the users give feedback on prototype
2. document them
3. Make suggestions to improve the user experience (**using hieuristics**)
4. implement them in the prototype

Task 9

1. Create Usability tests and execute the usability tests with a user
2. Get the users use the modified prototype
3. Gather feedback and measure its technical viability and effectiveness



Task 1 & Task 6

1. Techniques & methods to gather & analyse user feedback

< write 2 – 3 pointers with explanation>

2. Website 1: *<name of website 1>*

Experience: <write your own opinion/experience with the website>

add screenshots

<friend name>'s experience: <write your friend's opinion/experience with the website>

Website 2: *<name of website 2>*

Experience: <write your own opinion/experience with the website>

add screenshots

<friend name>'s experience: <write your friend's opinion/experience with the website>

Task 2

	Name of Website 1	Name of Website 2
Search	<add your experience/opinion on the UI UX> with screenshots	
Reset password		
…		

1. Registration
2. Login
3. Reset password
4. Search
5. Update profile

Any 3 of the 5 scenarios

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Task 3

Name of Website 1

	Desired Performance	Name of Website 1 performance	Gap
Search	20s	15s	5s
Reset password	90s	100s	-10s
…	45s		

Desired – actual
+ve → lesser time taken
-ve → more time taken

1. Registration
2. Login
3. Reset password
4. Search
5. Update profile

Any 3 of the 5 scenarios

Name of Website 2

	Desired Performance	Name of Website 2 performance	Gap
Search	20s	20s	0
Reset password	90s	50s	40s
…	45s		

Analysis

<add your analysis on the difference in gap between website 1 and website 2 for the same scenario>

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Wireframe

From Assignment 1 + 4 more scenarios

Persona

From Assignment 1

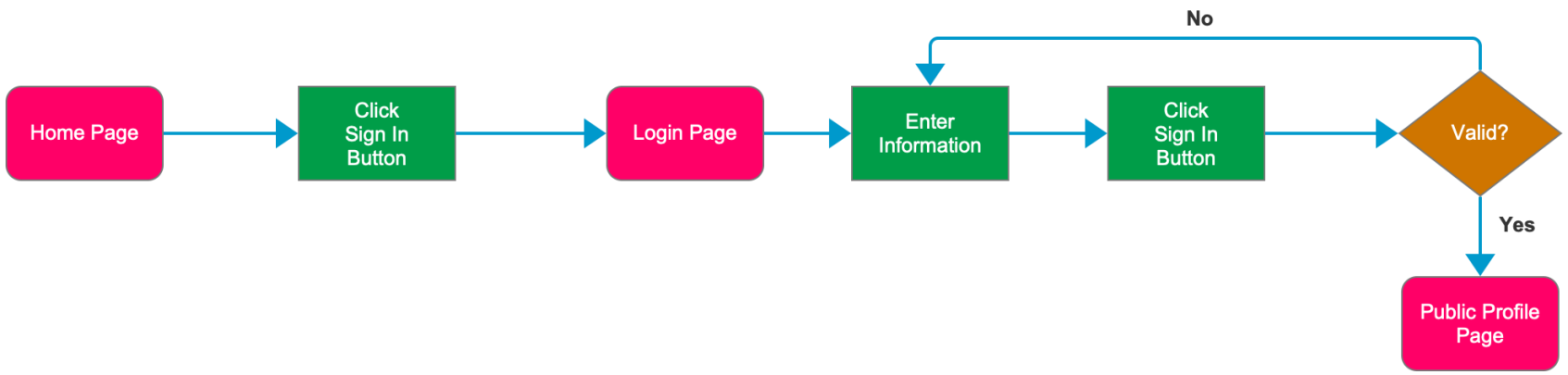
Task 5

Scenario 3: Login

Interaction Process

From Portal Home Page:

1. User clicks on the 'Sign In' button and reaches the Login Page.
2. User is required to key in the required information (Login ID and password) and click on 'Sign in' button.
3. If user forgot password, user can click on 'Forgot your password?' link and will be brought to the forgot password page.
4. Upon clicking on the 'Sign In' button, validation checks will be performed and error messages will be prompted to the user if any of the required information is missing.



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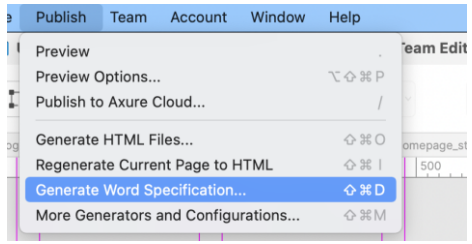
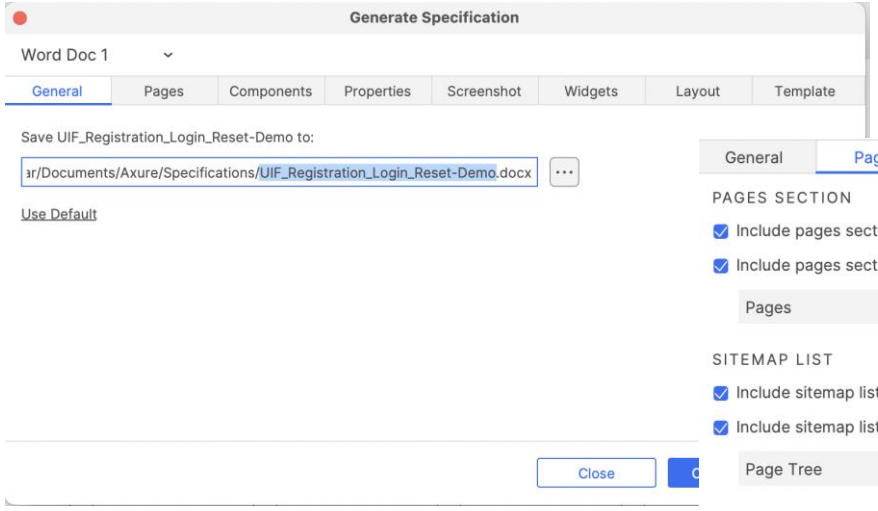
Task 7

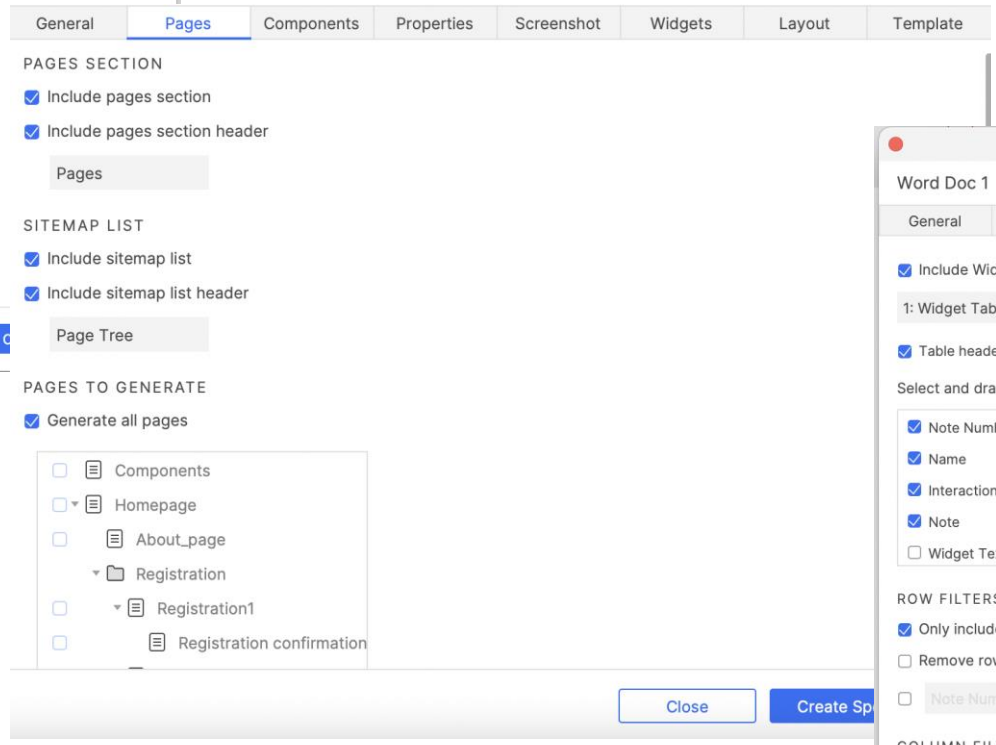
Go to Publish > Generate Word Specification…



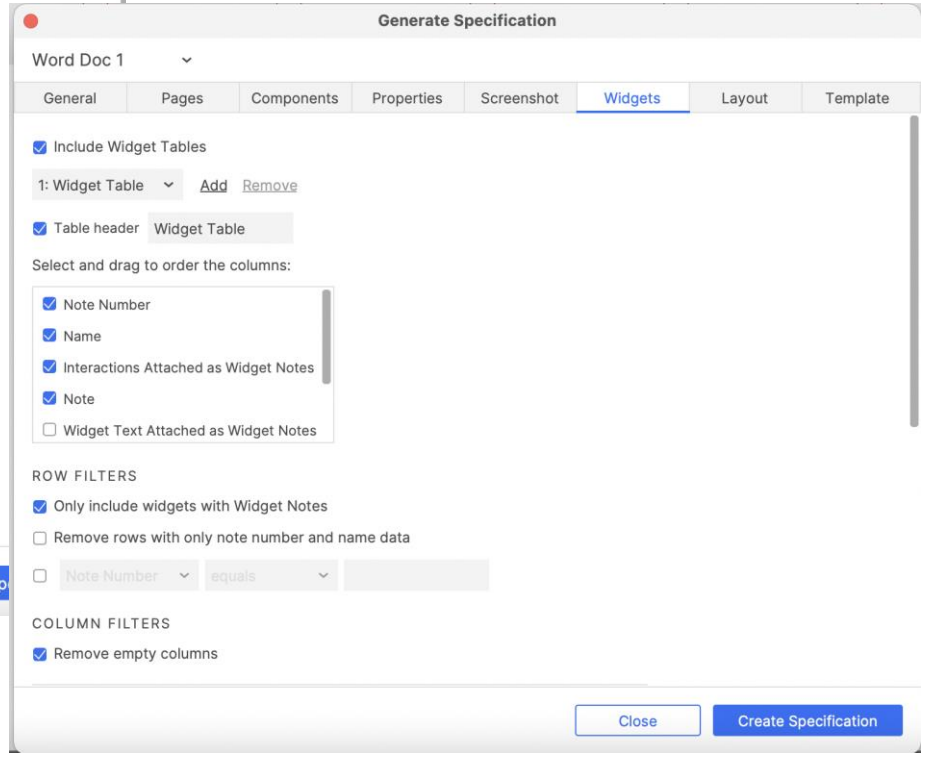
Choose the location > Rename the .docx file to your preference



Choose the pages to generate word specs



Choose the columns to be generated



Usability Testing

Collection of Data
Calculation of Metrics

Usability Testing

Why?

- To get feedback
- Check if we (Project Team) are on the right track

How?

- Observe representative users use the application
- Observe their reactions first-hand
- 3 stages:
  - Pre-test
  - Test
  - Post-test

Usability Testing

Pre-Test

- Define number of and who are the participants
- Plan the metrics needed to be collected – Efficiency, effectiveness & satisfaction
- Define appropriate tasks for participants
- Prepare test plan (what's going on, when and why)

Testing

- Ensure participants are comfortable
- Convey clear instructions/tasks
- Observe participants keenly (qualitative)
- Collect metrics during testing (quantitative) & gather feedback from participants (qualitative)
- Moderator/Observer should be respectful towards the participants and their time

Post-Test (Debrief)

- Observer and Moderator discuss the observation and quantitative data (metrics)
- Qualitative: What went well and what could have been done better
- Calculate UX Design Metrics (Task success rate, search vs navigation, etc)
- Modification → Re-test for features that the team have made changes

Usability Testing

Pre-Test

- Define number of and who are the participants
- Plan the metrics needed to be collected – Efficiency, effectiveness & satisfaction
- Define appropriate tasks for participants
- Prepare test plan (what's going on, when and why)

Usability Testing

Testing

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- Observe participants keenly (qualitative)
- Collect metrics during testing (quantitative) & gather feedback from participants (qualitative)
- Moderator/Observer should be respectful towards the participants and their time

Usability Testing

Post-Test

Debrief/Evaluation

- Observer and Moderator discuss the observation and quantitative data (metrics)
- Qualitative: What went well and what could have been done better; use **heuristics**
- Calculate UX Design Metrics (Task success rate, search vs navigation, etc)
- Modification → Re-test for features that the team have made changes

Modification

- Refine the prototype based on the feedback
- Re-test features that the team have made changes

Usability Test

(Sample)

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Pre-Test

Test plan

When:

Where:

Who:

How:
<which tool>

What:
<Tasks>
<Metrics>

Tasks (example)

1. Seller: Register in the portal
2. …
3. Consumer: Update your profile
4. …
5. …
6. Seller & Consumer: Reset your password
7. ….
8. Consumer: Search for xxxxx & view its details

Metrics (example)

1. TOT
2. TSR
3. …
4. …
5. …

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Testing (Data Collection)

By Tasks

Data & feedback collected for each task

Task #8

Consumer: Search for xxxxx & view its details

Metrics

TSR, TOT, UER (occurrence rate or error rate)

S/N	Participant Name	TOT (sec)	TSR	UER	Feedback
1	Alice	80	1		
2	Bob	75	1		
3	Charlie	95	1		
4	Danny	82	1		
5	Elizabeth	153	0		
Total or Average		**97s**	**80%**		

Analysis of feedback

<insert analysis and insights from feedback>

Overall

Data & feedback collected for overall prototype

NPS: How likely is it that you will recommend (brand, website, service, etc.) to a friend or colleague, 0 being not at all likely, and 10 being extremely likely?
CSAT: How satisfied are you with (website, product, service, etc.)?

S/N	Participant Name	NPS Score	CSAT Score	Overall Feedback
1	Alice	9	5	
2	Bob	10	4	
3	Charlie	7	3	
4	Danny	5	2	
5	Elizabeth	8	4	
Total or Average		**20%**	**60%**	

Analysis of feedback

<insert analysis and insights from feedback>

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Usability Testing (By tasks)

Task #8

Consumer: Search for xxxxx & view its details

Metrics

TSR, TOT, UER (occurrence rate or error rate)

S/N	Participant Name	TOT (sec)	TSR	UER	Feedback
1	Alice				
2	Bob				
3	Charlie				
4	Danny				
5	Elizabeth				
Total or Average					

Analysis of feedback

<insert analysis and insights from feedback>

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Task 1

Metrics

TSR, TOT, UER (occurrence rate or error rate)

S/N	Participant Name	TOT (sec)	TSR	UER	Feedback
1	Alice	80	1		
2	Bob	75	1		
3	Charlie	95	1		
4	Danny	82	1		
5	Elizabeth	153	0		
Total or Average		**97s**	**80%**		

Analysis of feedback

<insert analysis and insights from feedback>

Task 2

Metrics

TSR, TOT, UER (occurrence rate or error rate)

S/N	Participant Name	TOT (sec)	TSR	UER	Feedback
1	Alice	80	1		
2	Bob	75	1		
3	Charlie	95	1		
4	Danny	82	1		
5	Elizabeth	153	0		
Total or Average		**97s**	**80%**		

Analysis of feedback

<insert analysis and insights from feedback>

Task 3

Metrics

TSR, TOT, UER (occurrence rate or error rate)

S/N	Participant Name	TOT (sec)	TSR	UER	Feedback
1	Alice	80	1		
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3	Charlie	95	1		
4	Danny	82	1		
5	Elizabeth	153	0		
Total or Average		**97s**	**80%**		

Analysis of feedback

<insert analysis and insights from feedback>

..... (do one for each task)

Task #8

Consumer: Search for xxxxx & view its details

Metrics

TSR, TOT, UER (occurrence rate or error rate)

S/N	Participant Name	TOT (sec)	TSR	UER	Feedback
1	Alice	80	1		
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4	Danny	82	1		
5	Elizabeth	153	0		
Total or Average		**97s**	**80%**		

Analysis of feedback

<insert analysis and insights from feedback>

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Usability Testing (Overall)

NPS: How likely is it that you will recommend (brand, website, service, etc.) to a friend or colleague, 0 being not at all likely, and 10 being extremely likely?
CSAT: How satisfied are you with (website, product, service, etc.), 1 being very unsatisfied and 5 being very satisfied?

S/N	Participant Name	NPS Score	CSAT Score	Overall Feedback
1	Alice	9	5	
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3	Charlie	7	3	
4	Danny	5	2	
5	Elizabeth	8	4	
Total or Average		**20%**	**60%**	

Analysis of feedback

<insert analysis and insights from feedback>

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Usability Metrics Calculation

(for Summative Assessment)

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Calculation

$$\text{Task Success Rate} = \frac{\text{No. of participants completed task successfully}}{\text{Total no. of participants}} \times 100\%$$

Example:

Total: 5 participants

Completed Search successfully: 3 participants

$$\text{TSR} = \frac{3}{5} \times 100\% = 60\%$$

$$\text{Average Time on Task} = \frac{\text{Total time taken by participants (in sec)}}{\text{Total no. of participants}}$$

$$\text{Avg TOT} = \frac{80 + 75 + 95 + 82 + 153}{5} = 97\text{s}$$

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Calculation (User Error Rate)

Task: Reset password

$$\text{Error Occurrence Rate} = \frac{\text{No. of participants made error}}{\text{Total no. of participants}} \text{ X } 100\%$$

Total: 5 participants

P1 – 1 error

P2 – 1 error

P3 – 2 errors

P4 – 0 error

P5 – 5 errors

$$\text{UER} = \frac{4}{5} \text{ X } 100\%$$

$$= 80\%$$

$$\text{User Error Rate} = \frac{\text{Total no. of errors made by participants}}{\text{Total number of possible errors}} \text{ X } 100\%$$

No. of possible errors per user = 5
(forget pw link, type email, reset code, reset pw, confirm pw)

Total: 5 participants

P1 – 1 error

P2 – 1 error

P3 – 2 errors

P4 – 0 error

P5 – 5 errors

$$\text{UER} = \frac{1 + 1 + 2 + 0 + 5}{5 * 5} \text{ X } 100\%$$

$$= 36\%$$

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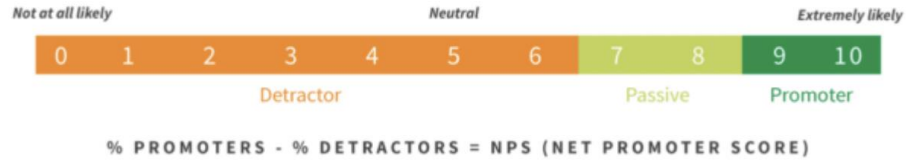
Calculation

Example:

$$\text{Net Promoter Score} = \frac{\text{No. of promoters} - \text{No. of detractors}}{\text{Total number of participants}} \times 100\%$$



Total: 5 participants

P1 – 9 (prom)

P2 – 10 (prom)

P3 – 7 (passive)

P4 – 5 (Detrac)

P5 – 8 (passive)

$$\text{NPS} = \frac{2 - 1}{5} \times 100\%$$

$$= 20\%$$

$$\text{Customer Satisfaction} = \frac{\text{No. of 'Satisfied' + No. of 'Very Satisfied'}}{\text{Total number of participants}} \times 100\%$$

Total: 5 participants

P1 – very satisfied (5)

P2 – unsatisfied (2)

P3 – satisfied (4)

P4 – satisfied (4)

P5 – neutral (3)

$$\text{CSAT} = \frac{3}{5} \times 100\%$$

$$= 60\%$$

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Post-Test Analysis

Heuristics

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Nielsen's 10 Recommended Heuristics

- Analyse the feedback and relate it to the heuristics.
- **Elaborate** whether your prototype is/is not aligned with the heuristics
- Identify modifications that need to be made **based** on the heuristics

1. Visibility of system status
2. Match between system and the real world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Help users recognize, diagnose, and recover from errors
10. Help and documentation

(for more details, refer to the slides shared on heuristics)

Evaluating User Experience

- User Experience is a qualitative metric, that is subjected to many factors
- It is an evolving discipline and constantly being updated
- Need to objectively evaluate a design
  - Apple: iOS Human Interface Guidelines (https://developer.apple.com/ios/human-interface-guidelines/)
  - Google: Material Design Guidelines (https://material.io/design)
  - Jakob Nielsen: One of the pioneers who tried to evaluate the user experience on digital platforms with his **heuristic evaluation**

Heuristic Evaluation

- A “discount” usability engineering method. It is quick, cheap, and easy way to evaluate a UI
- Experts examine UI guided by heuristics and record:
  - Problems
  - Severity ratings
  - Solutions (optional)

Nielsen’s 10 Recommended Heuristics

1. Visibility of system status
2. Match between system and the real world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Help users recognize, diagnose, and recover from errors
10. Help and documentation

*see the notes below for explanations in the slides with examples

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Nielsen’s 10 Recommended Heuristics – In Brief (1 of 2)

1.Visibility of system status
The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

2.Match between system and the real world
The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

3.User control and freedom
Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

4.Consistency and standards
Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

5.Error prevention
Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

Nielsen’s 10 Recommended Heuristics – In Brief (2 of 2)

6.Recognition rather than recall
Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

7.Flexibility and efficiency of use
Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

8.Aesthetic and minimalist design
Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

9.Help users recognize, diagnose, and recover from errors
Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

10.Help and documentation
Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

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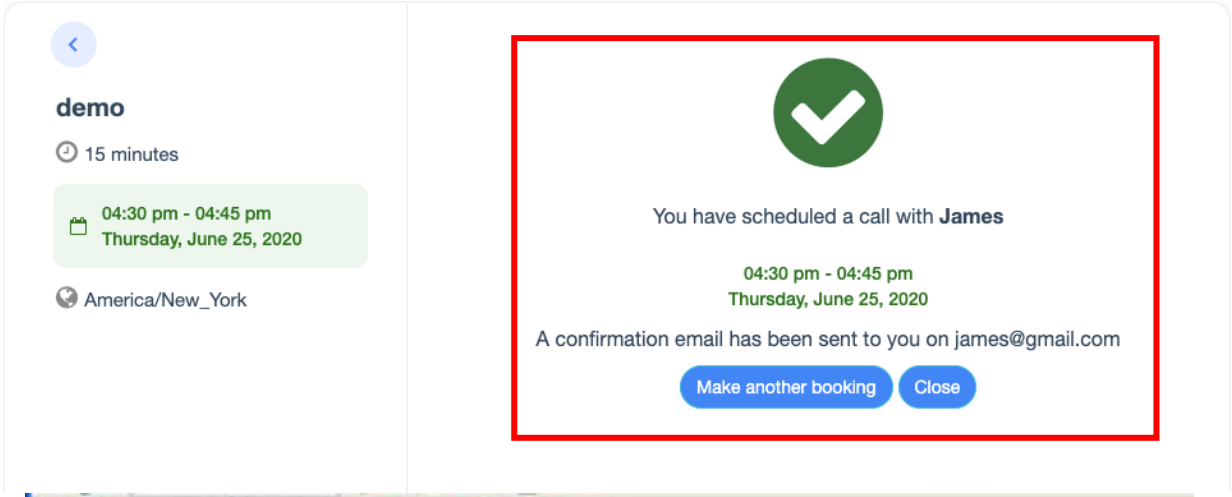
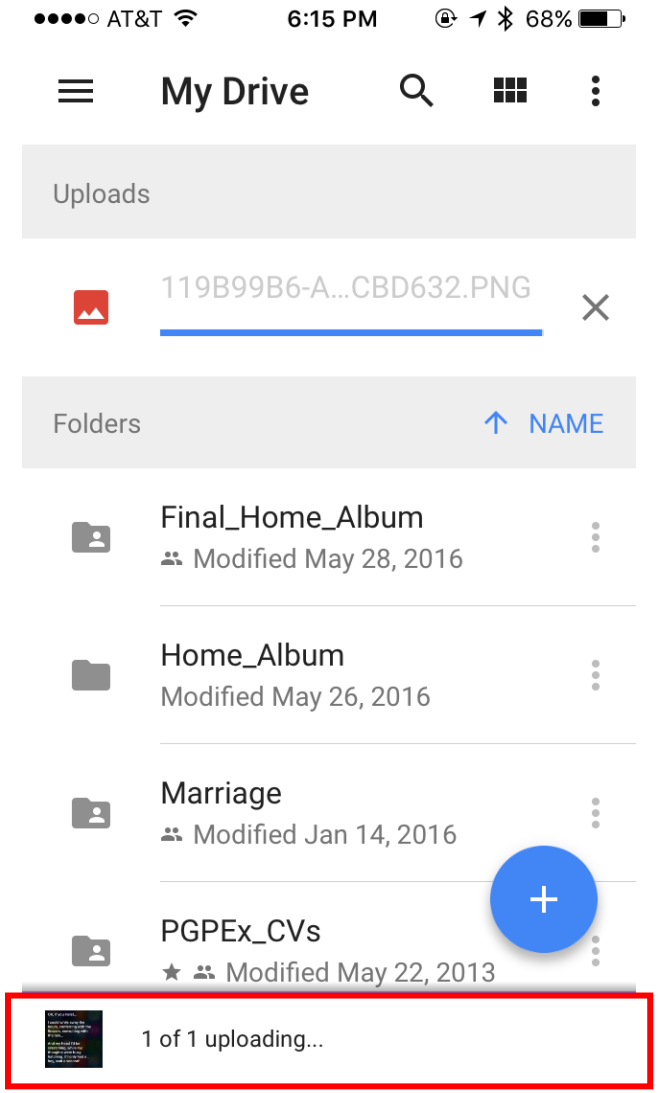
Heuristic 1: Visibility of system status





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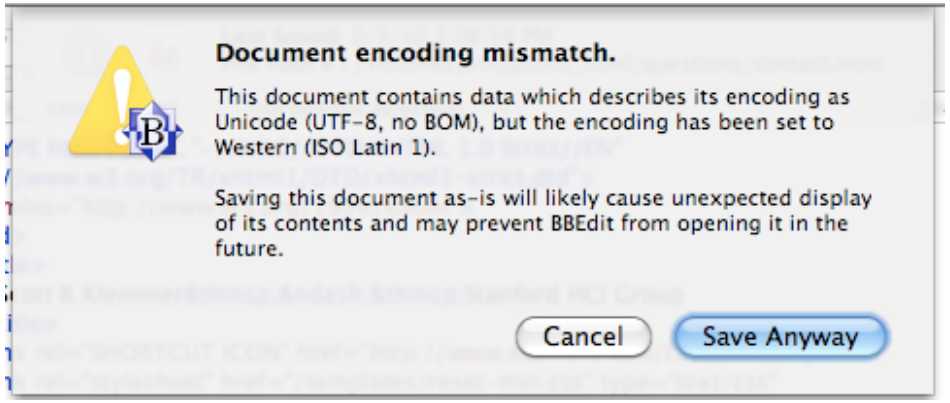
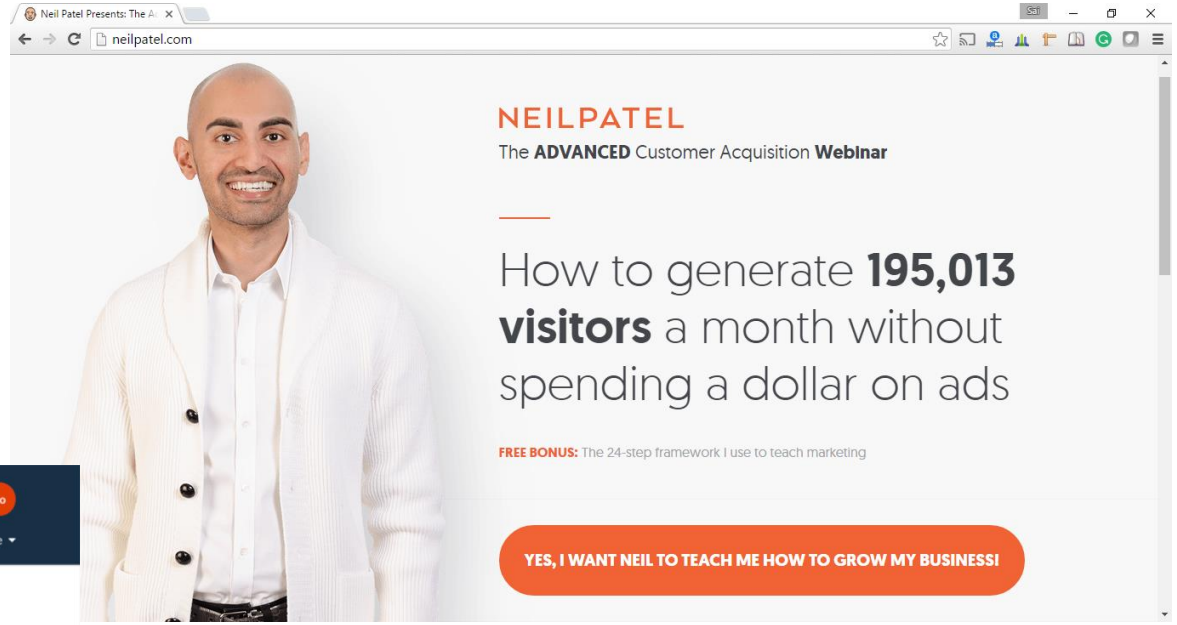
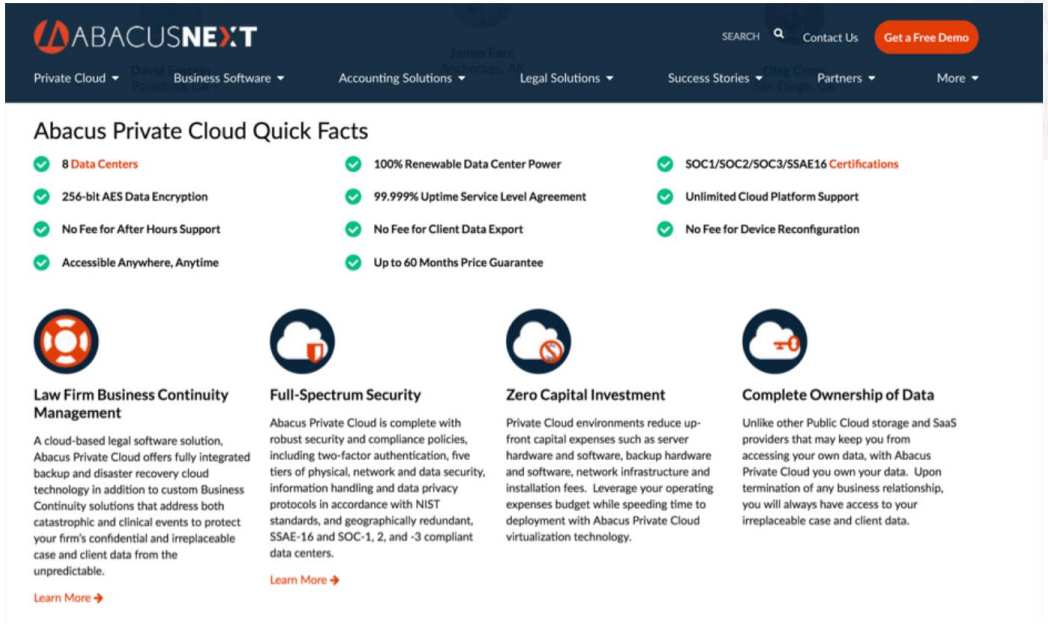
Heuristic 2: Match between system and the real world







← Bad example

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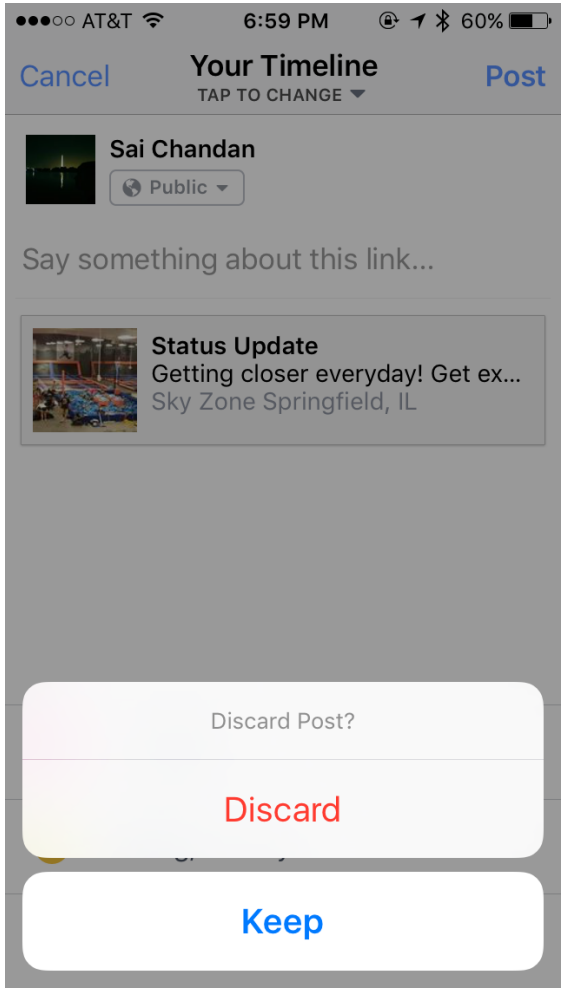
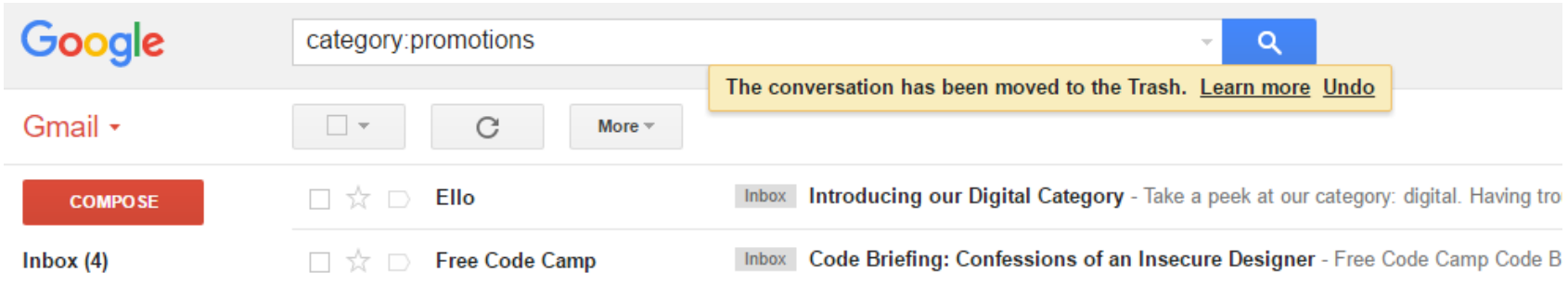
Heuristic 3: User control and freedom





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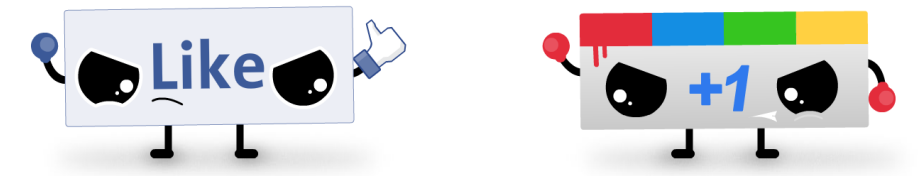
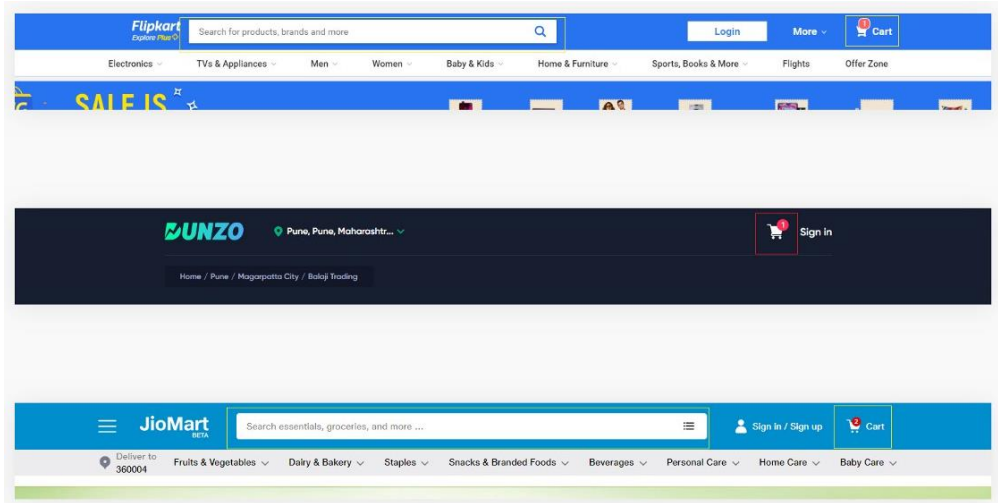
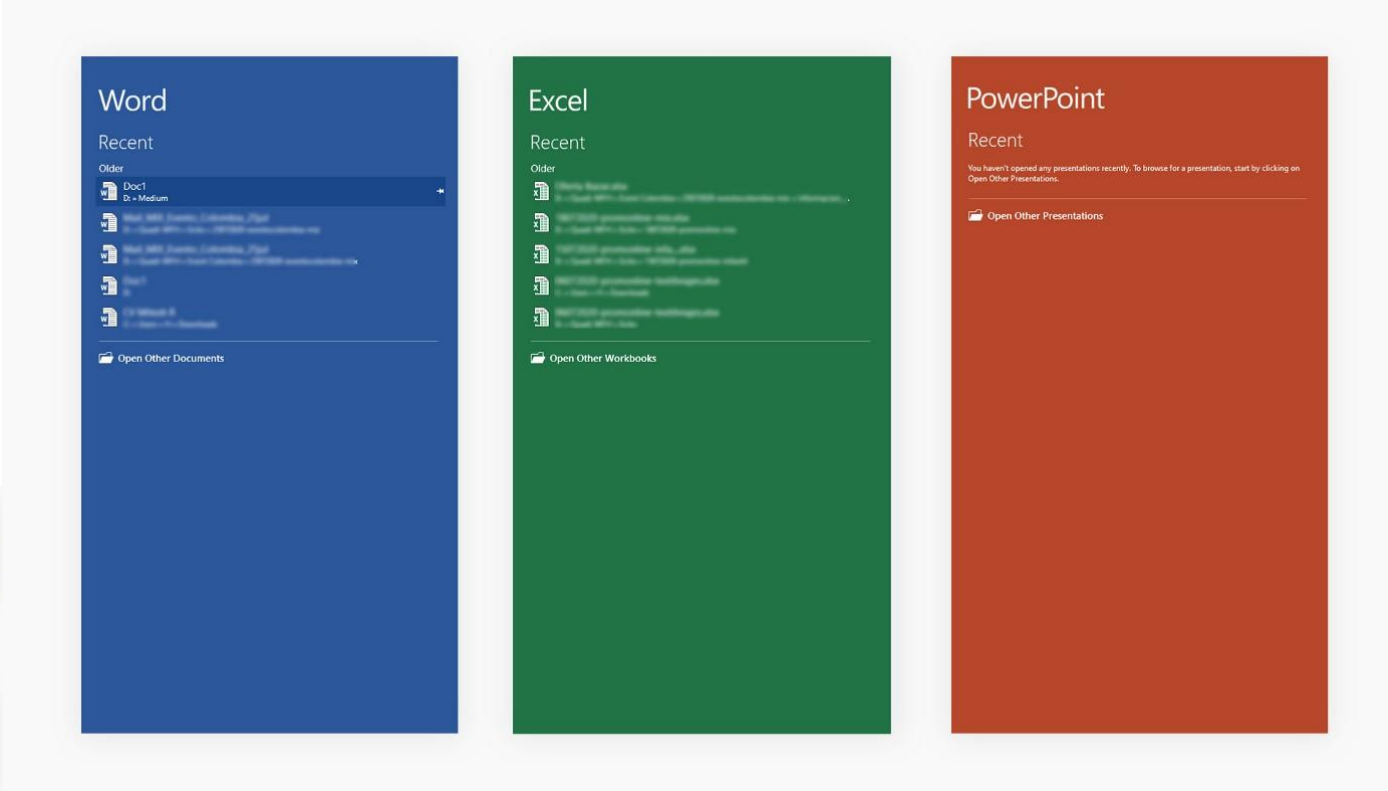
Heuristic 4: Consistency and standards







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Nielsen’s 10 Recommended Heuristics – In Brief (1 of 2)

1.Visibility of system status
The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

2.Match between system and the real world
The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

3.User control and freedom
Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

4.Consistency and standards
Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

5.Error prevention
Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

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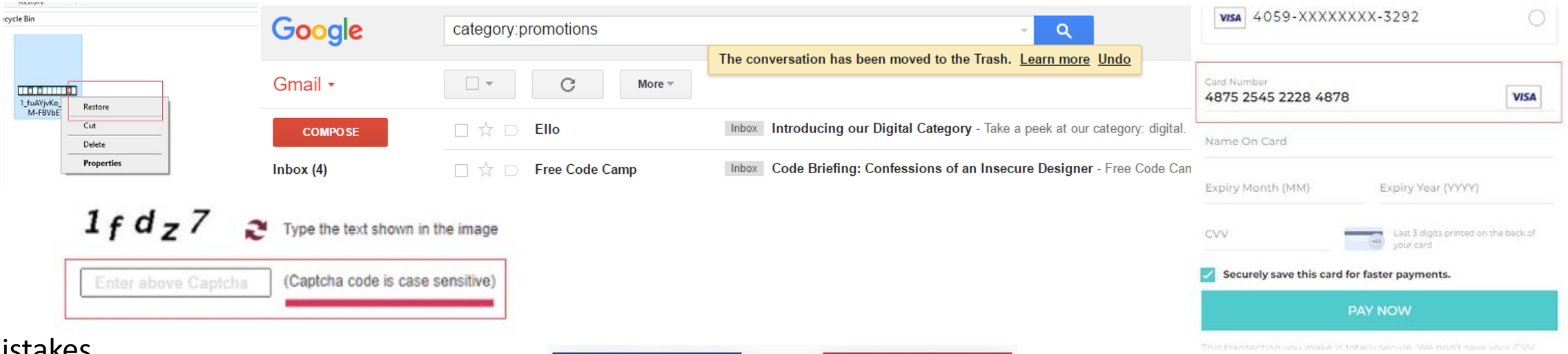
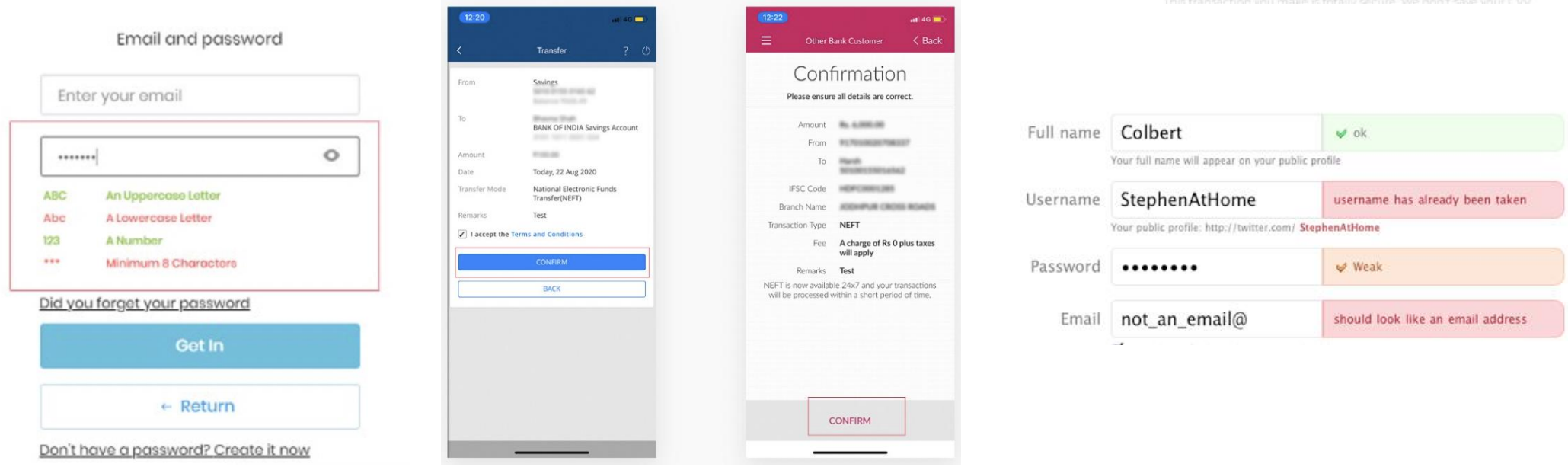
Heuristic 5: Error prevention

Slips



Mistakes



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Nielsen’s 10 Recommended Heuristics – In Brief (2 of 2)

6.Recognition rather than recall
Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

7.Flexibility and efficiency of use
Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

8.Aesthetic and minimalist design
Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

9.Help users recognize, diagnose, and recover from errors
Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

10.Help and documentation
Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

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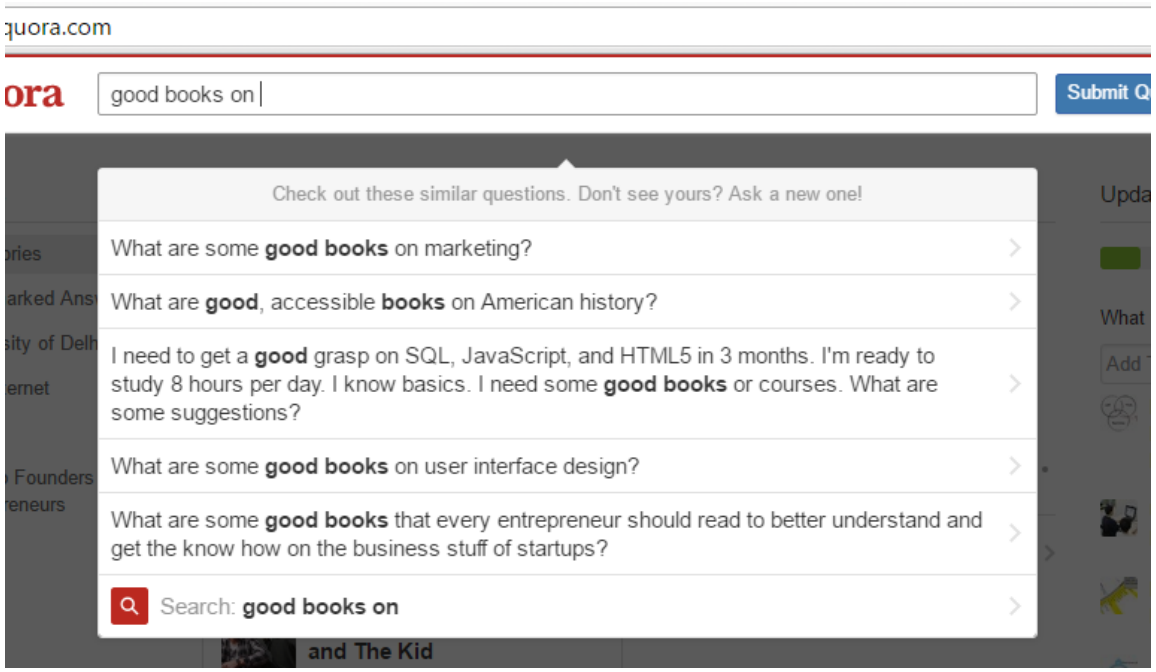
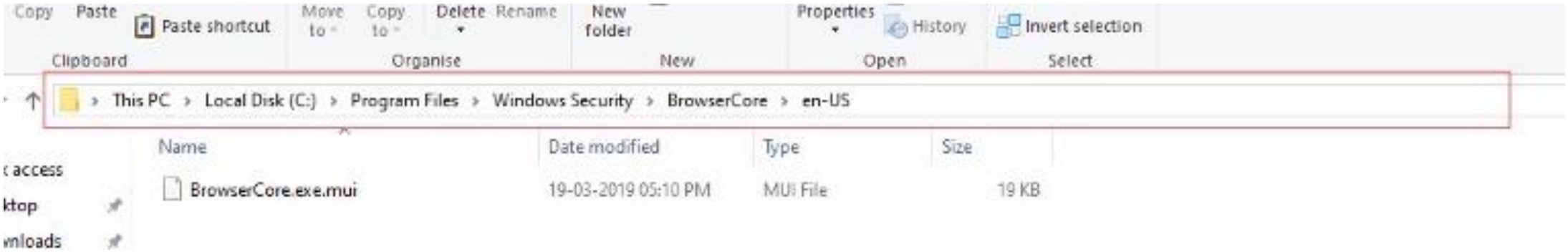
Heuristic 6: Recognition rather than recall





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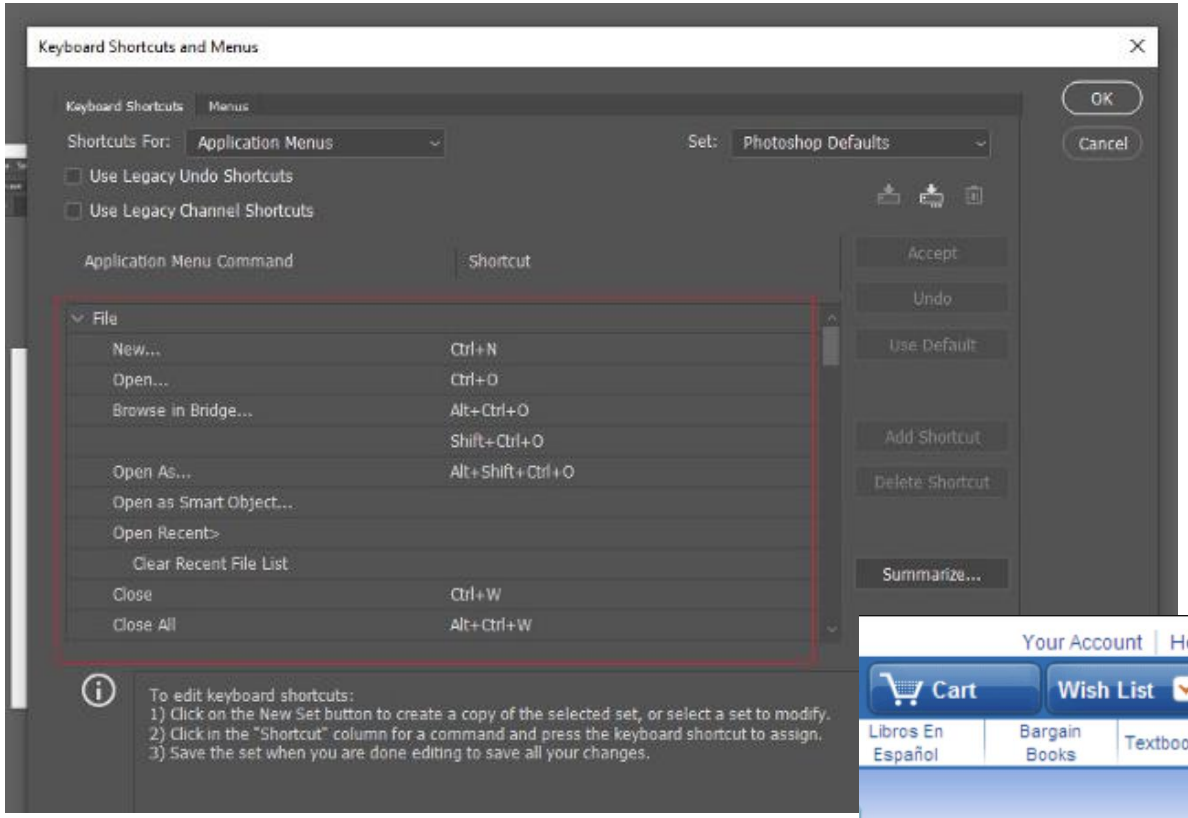
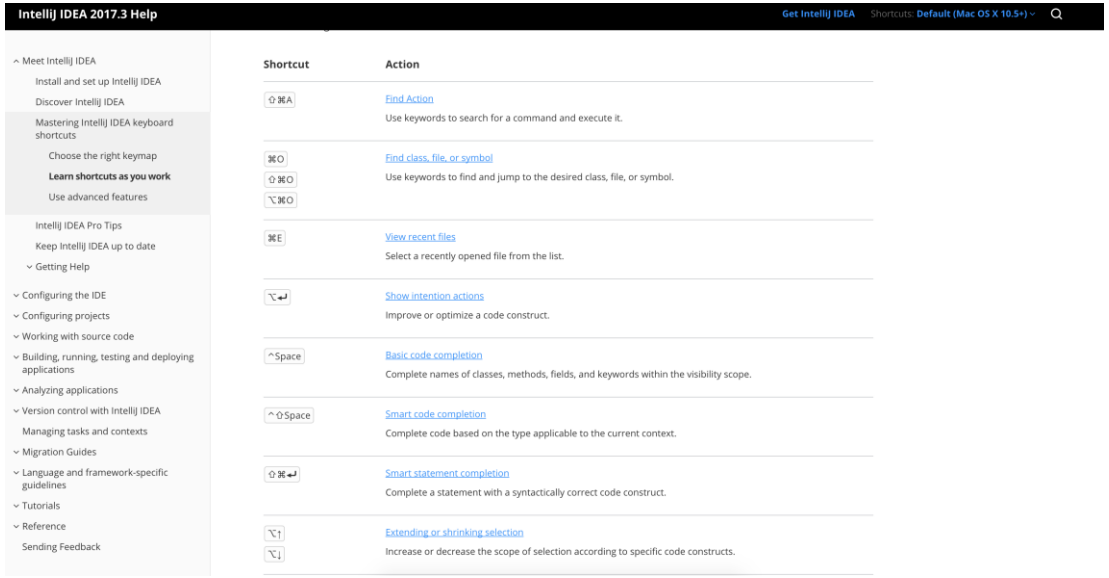
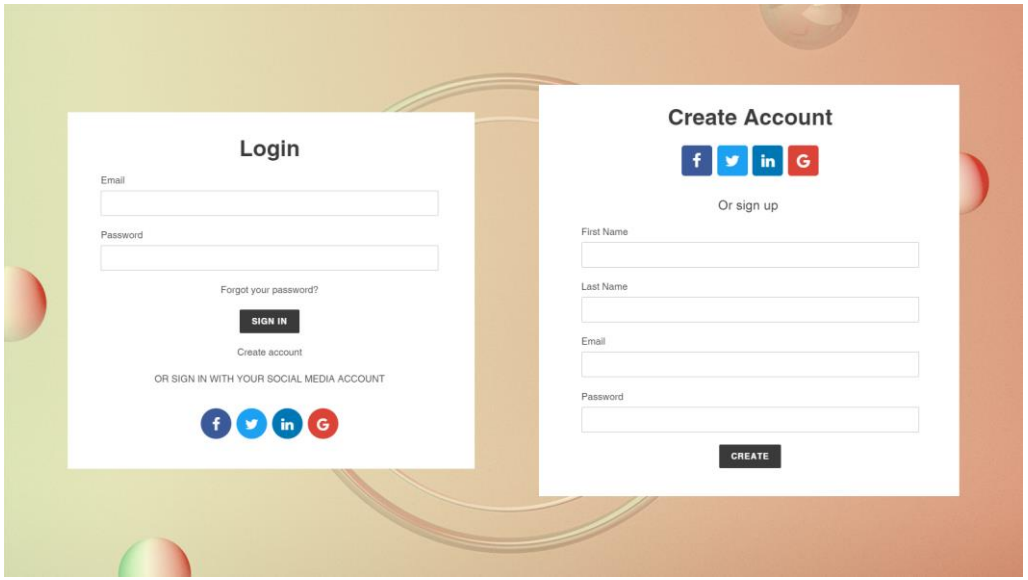
Heuristic 7: Flexibility and efficiency of use







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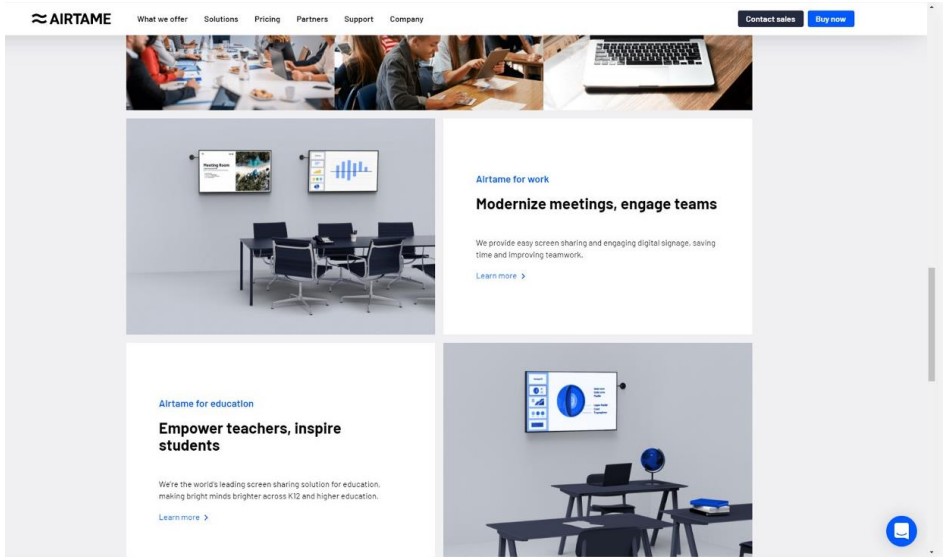
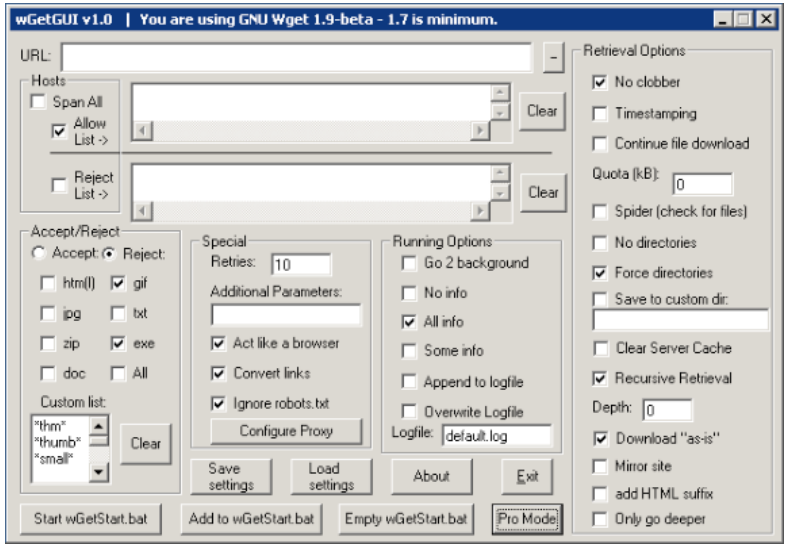
Heuristic 8: Aesthetic and minimalist design





← Bad example

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Nielsen's 10 Recommended Heuristics – In Brief (2 of 2)

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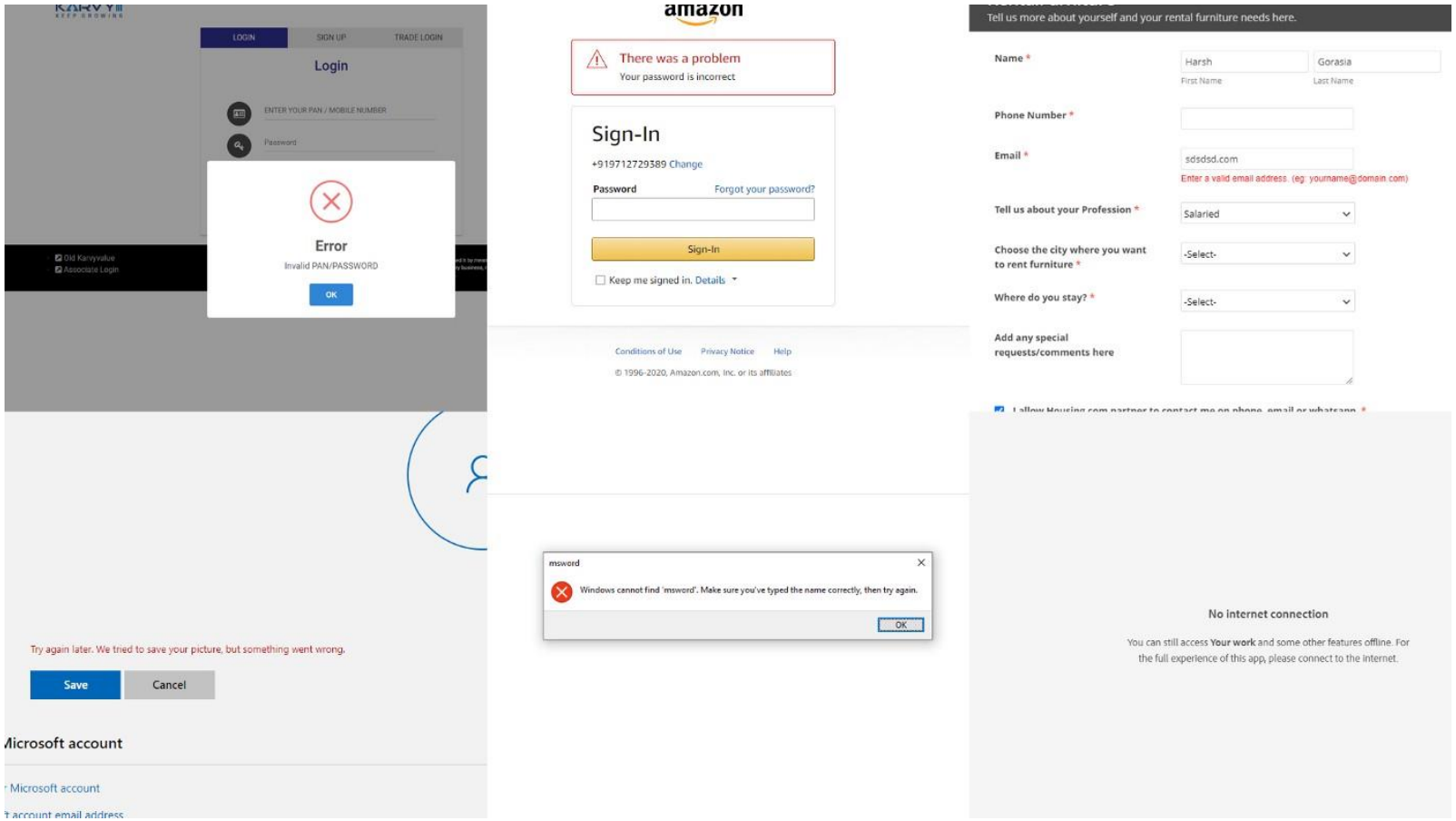
Heuristic 9: Help users recognize, diagnose, and recover from errors



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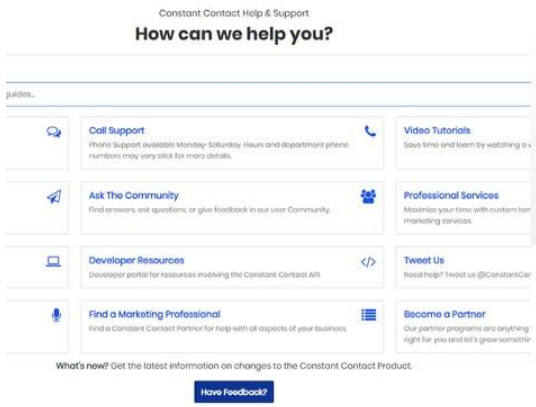
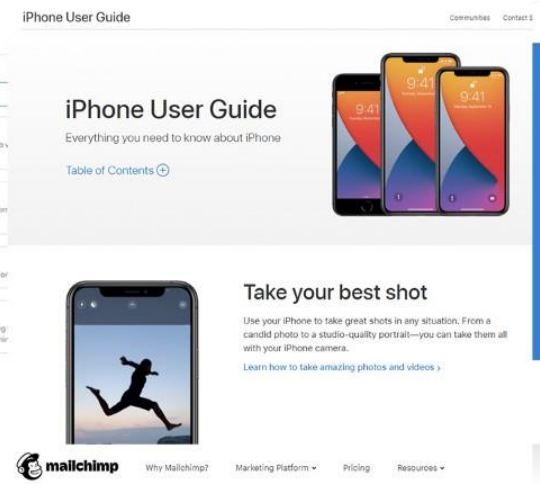
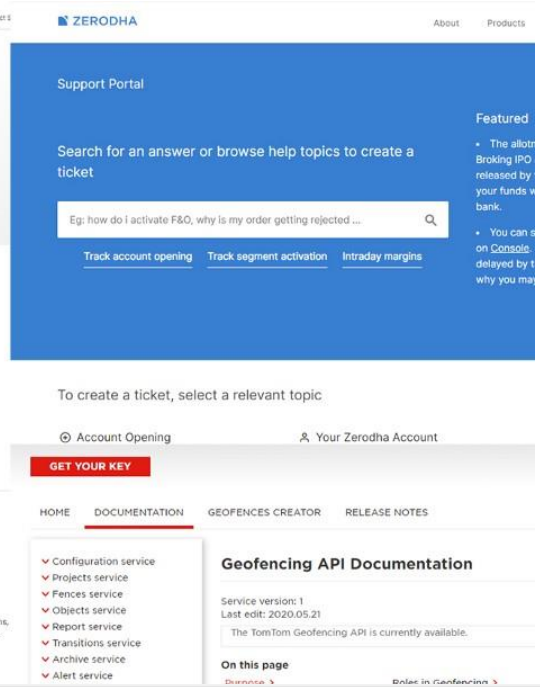
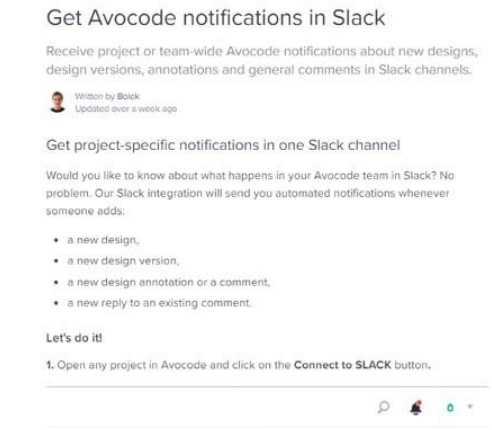
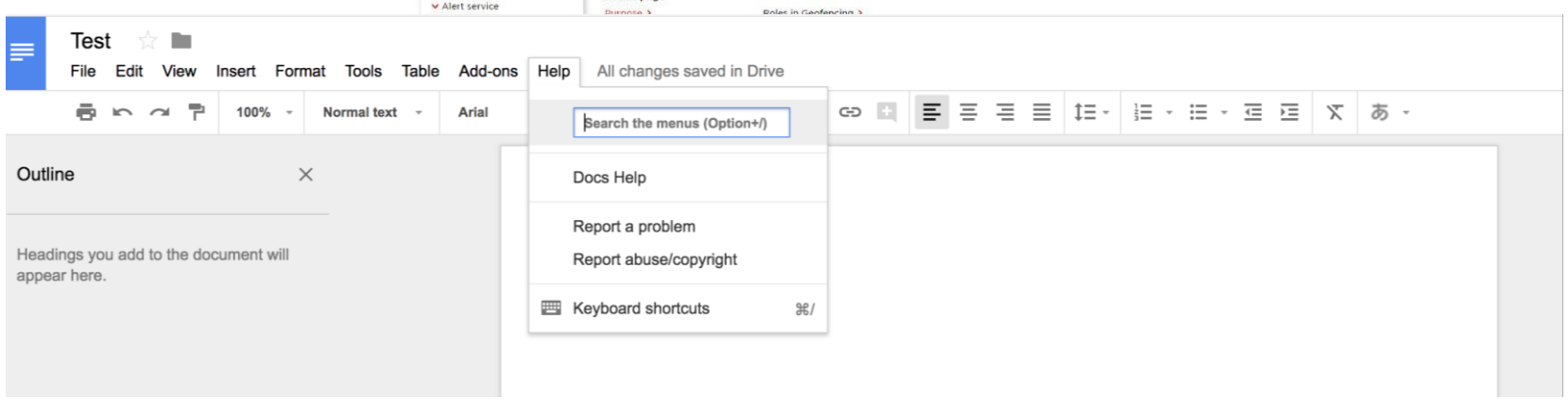
Heuristic 10: Help and documentation











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Thank you

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