UNO Flip Remix GenderMag Report

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Contents

1   Introduction

As part of our capstone project, we need to choose two extras beside the usual documentation and implementation of our software. Based on the nature and necessity of our project, we chose GenderMag as one of our extras. This report is intended to list all the details in the GenderMag process that we used to evaluate our software product, as well as the list of new requirements we devised as a result of our GenderMag analysis. This includes our customized personas, all the subgoal and action report forms we used in our analysis, as well as the new requirements we devised based on the GenderMag analysis.

2   Our Customized Personas

2.1   Abi (Abigail/Abishek)

2.1.1   Background and Skills

- 28 years old

- Employed as Accountant

- Casual Gamer who interested in UNO Flip

- Lives in Mississauga, Ontario, Canada

Abi has always liked music. While traveling to work in the morning, Abi listens to music from a wide variety of styles. Some nights Abi exercises or stretches, and sometimes likes to play computer games like UNO, puzzles. Abi likes scanning all her emails first to get an overall picture before answering any of them.

The technologies at Abi's new employer are new to her. Abi likes math and working with logic. She considers herself a numbers person. Abi works as an accountant and is comfortable with the technologies Abi uses regularly. Abi just moved to this employer 1 week ago, and their software systems are new to her. Abi writes and edits spreadsheet formulas for work. During free time, Abi also enjoys working with numbers and logic. Abi especially likes working out UNO and puzzle games, either on paper or on the computer. She doesn't like tinkering with unfamiliar things until she get the overall pictures or general rules.

2.1.2 Motivations and Attitudes

- **Motivations:** Abi uses technologies to accomplish her tasks. She learns new technologies if and when she needs to, but prefers to use methods she is already familiar and comfortable with, to keep her focus on the tasks she cares about.

- **Computer Self-Efficacy:** Abi has lower self confidence than her peers about doing unfamiliar computing tasks. If problems arise with her technology, she often blames herself for these problems. This affects whether and how she will persevere with a task if technology problems have arisen.

- **Attitude toward Risk:** Abi's life is a little complicated and she rarely has spare time. So she is risk averse about using unfamiliar technologies that might need her to spend extra time on them, even if the new features might be relevant. She instead performs tasks using familiar features, because they're more predictable about what she will get from them and how much time they will take.

2.1.3 Attitude to Technology

- **Information Processing Style:** Abi tends towards a comprehensive information processing style when she needs to gather more information. So,instead of acting upon the first option that seems promising, she gathers information comprehensively to try to form a complete understanding of the problem before trying to solve it. Thus, her style is "burst-y"; first she reads a lot, then she acts on it in a batch of activity.

- **Learning: by Process versus by Tinkering:** When learning new technology, Abi leans toward process-oriented learning, e.g., tutorials, step-by-step processes, wizards, online how-to videos, etc. She doesn't particularly like learning by tinkering with software (i.e., just trying out new features or commands to see what they do), but when she does tinker, it has positive effects on her understanding of the software.

2.2 Tim (Timothy/Timara)

2.2.1 Background and Skills

- 25 years old

- Employed as an Web Developer

- Casual Gamer who interested in UNO Flip

- Lives in Waterloo, Ontario, Canada

Tim loves public transportation. Tim knows several routes to get to work from home and always exploring ways to optimize trips into the office. Some nights Tim plays computer games with some online friends. He loves playing Minecraft and UNO. Tim starts work with answering emails one by one. Sometimes this backfires, if there is a second related message he hasn't read yet, but he doesn't mind sending a follow-up email.

The technologies at Tim's new employer are new to him. Tim likes math and working with logic. he considers himself a numbers person. Tim works as a web developer and is comfortable with any technologies whether familiar or new. Tim moved to this employer 1 year ago, and their software systems are new to him. Tim writes and edits code for work. During free time, Tim also enjoys working with numbers and logic. Tim especially likes playing video games, whether it is 2D or 3D.

2.2.2 Motivations and Attitudes

- **Motivations:** Tim likes learning all the available functionality on all of his devices and computer systems he uses, even when it may not be necessary to help his achieve his tasks. he sometimes finds himself exploring functions of one of his gadgets for so long that he loses sight of what he wanted to do with it to begin with.

- **Computer Self-Efficacy:** Tim has high confidence in his abilities with technology, and thinks he's better than the average person at learning about new features. If he can't fix the problem, he blames it on the software vendor. It's not his fault if he can't get it to work.

- **Attitude toward Risk:** Tim doesn't mind talking risks using features of technology. that haven't been proven to work. When he is presented

with challenges because he has tried a new way that doesn't work, it doesn't changes his attitudes toward technology.

2.2.3 Attitude to Technology

- **Information Processing Style:** Tim leans towards a selective information processing style or "depth first" approach. That is, he usually delves into the first promising option, pursues it, and if it doesn't work out he backs out and gathers a bit more information until he sees another option to try. Thus, his style is very incremental.

- **Learning: by Process versus by Tinkering:** Whenever Tim uses new technology, he tries to construct his own understanding of how the software works internally. He likes tinkering and exploring the menu items and functions of the software in order to build that understanding. Sometimes he plays with features too much, losing focus on what he set out to do originally, but this helps him gain better understanding of the software.

3 Method Used

Our team followed the exact method outlined in our GenderMag tutorial slides. Here is the stpes we used for our GenderMag analysis:

1. We generalize two use cases for our analysis.

2. We customized our personas listed in the previous section.

3. we set aside 45 minutes for meeting and debrief.

4. We fill out everything we discussed into the subgoal and action report form.

5. We fill out all the forms with appropriate facets.

6. We then identify all the new requirement that emerged from the analysis.

7. We implement these new requirements into our project.

4 Use Case

We identify two use cases that are the most critical to our project:

1. User connect with other users

2. User playing the game

5 Subgoal Report Forms

5.1 Form 1

Date of evaluation: March 6, 2025
Team: Team 24

Subgoal report form

Use case:

Abi connect with other users

Subgoal:

Abi wants to appear online and get herself a name

Will Case:

Will Abi succeed in appearing online and name herself the name she wanted?

Yes ✓	• Motivations ✓ • Information Processing Style ✓ • Computer Self-Efficacy • Attitude Towards Risk ✓ • Learning: by Process vs. by Tinkering ✓ • None of the above	There is clear instruction on the user interface and Abi should be fine navigate based on her style in naming herself and get online.
Maybe	• Motivations • Information Processing Style • Computer Self-Efficacy • Attitude Towards Risk • Learning: by Process vs. by Tinkering • None of the above	
No	• Motivations • Information Processing Style • Computer Self-Efficacy • Attitude Towards Risk • Learning: by Process vs. by Tinkering • None of the above	

5.2 Form 2

Date of evaluation: March 6, 2025
Team: Team 24

Subgoal report form

Use case:

Tim connect with other users

Subgoal:

Tim wants to appear online and get herself a name

Will Case:

Will Tim succeed in appearing online and name herself the name she wanted?

Yes ✓	 • Motivations ✓ • Information Processing Style ✓ • Computer Self-Efficacy • Attitude Towards Risk ✓ • Learning: by Process vs. by Tinkering ✓ • None of the above	The instruction listed on the user interface is simple and clear, Tim should have good understanding of what is going on even though he link tinkering.
Maybe	 • Motivations • Information Processing Style • Computer Self-Efficacy • Attitude Towards Risk • Learning: by Process vs. by Tinkering • None of the above	
No	 • Motivations • Information Processing Style • Computer Self-Efficacy • Attitude Towards Risk • Learning: by Process vs. by Tinkering • None of the above	

5.3 Form 3

Date of evaluation: March 6, 2025
Team: Team 24

Subgoal report form

Use case:

Abi connect with other users

Subgoal:

Abi wants to match with other users

Will Case:

Will Abi succeed in matching with other users?

Yes	• Motivations • Information Processing Style • Computer Self-Efficacy • Attitude Towards Risk • Learning: by Process vs. by Tinkering • None of the above	
Maybe ✓	• Motivations • Information Processing Style ✓ • Computer Self-Efficacy • Attitude Towards Risk ✓ • Learning: by Process vs. by Tinkering ✓ • None of the above	Our instruction is clear when there is a user ready to be matched. However, if there is no other users ready to be matched at the moment, our instruction is not clear enough for Abi to know what is going on.
No	• Motivations • Information Processing Style • Computer Self-Efficacy • Attitude Towards Risk • Learning: by Process vs. by Tinkering • None of the above	

5.4   Form 4

Date of evaluation: March 6, 2025
Team: Team 24

Subgoal report form

Use case:

Tim connect with other users

Subgoal:

Tim wants to match with other users

Will Case:

Will Tim succeed in matching with other users?

Yes ✓	- Motivations - Information Processing Style ✓ - Computer Self-Efficacy - Attitude Towards Risk ✓ - Learning: by Process vs. by Tinkering ✓ - None of the above	Tim likes Tinkering, so he should be able to restart the entire process again until an available player is matched
Maybe	- Motivations - Information Processing Style - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering - None of the above	
No	- Motivations - Information Processing Style - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering - None of the above	

5.5 Form 5

Date of evaluation: March 6, 2025
Team: Team 24

Subgoal report form

Use case:

Abi playing the game

Subgoal:

Abi knows what to do next during the game

Will Case:

Will Abi succeed in knowing about what to do next during the game?

Yes ✓	- Motivations ✓ - Information Processing Style ✓ - Computer Self-Efficacy - Attitude Towards Risk ✓ - Learning: by Process vs. by Tinkering ✓ - None of the above	The rules, card layout, and design in our game should be exactly the same with real-life scenario. If Abi is familiar with the UNO Flip game, she should know what to do the next.
Maybe	- Motivations - Information Processing Style - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering - None of the above	
No	- Motivations - Information Processing Style - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering - None of the above	

5.6 Form 6

Date of evaluation: March 6, 2025
Team: Team 24

Subgoal report form

Use case:

Tim playing the game

Subgoal:

Tim knows what to do next during the game

Will Case:

Will Tim succeed in knowing about what to do next during the game?

Yes ✓	• Motivations ✓ • Information Processing Style ✓ • Computer Self-Efficacy • Attitude Towards Risk ✓ • Learning: by Process vs. by Tinkering ✓ • None of the above	The rules, card layout, and design in our game should be exactly the same with real-life scenario. If Tim is familiar with the UNO Flip game, he should know what to do the next.
Maybe	• Motivations • Information Processing Style • Computer Self-Efficacy • Attitude Towards Risk • Learning: by Process vs. by Tinkering • None of the above	
No	• Motivations • Information Processing Style • Computer Self-Efficacy • Attitude Towards Risk • Learning: by Process vs. by Tinkering • None of the above	

5.7   Form 7

Date of evaluation: March 6, 2025
Team: Team 24

Subgoal report form

Use case:

Abi playing the game

Subgoal:

Abi want to exit the game

Will Case:

Will Abi succeed in exiting the game when she doesn't want to play anymore?

Yes	- Motivations - Information Processing Style - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering - None of the above	
Maybe	- Motivations - Information Processing Style - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering - None of the above	
No ✓	- Motivations ✓ - Information Processing Style ✓ - Computer Self-Efficacy - Attitude Towards Risk ✓ - Learning: by Process vs. by Tinkering ✓ - None of the above	Abi can't exit the game because there no clear button or instructions to let her do so, unless she force the game to close. However, since she like instructions and don't want to risk, it is hard for her to do so.

5.8   Form 8

Date of evaluation: March 6, 2025
Team: Team 24

Subgoal report form

Use case:

Tim playing the game

Subgoal:

Tim want to exit the game

Will Case:

Will Tim succeed in exiting the game when he doesn't want to play anymore?

Yes	- Motivations - Information Processing Style - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering - None of the above	
Maybe ✓	- Motivations ✓ - Information Processing Style ✓ - Computer Self-Efficacy - Attitude Towards Risk ✓ - Learning: by Process vs. by Tinkering ✓ - None of the above	Although there is no clear button on the game interface, Tim can make the game exit by force closing itself when he doesn't want to play anymore.
No	- Motivations - Information Processing Style - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering - None of the above	

5.9 Form 9

Date of evaluation: March 6, 2025
Team: Team 24

Subgoal report form

Use case:

Abi playing the game

Subgoal:

Abi want to exit or restart the game when game over

Will Case:

Will Abi succeed in exiting or restart the game when game over?

Yes ✓	- Motivations ✓ - Information Processing Style ✓ - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering ✓ - None of the above	She will successfully exiting the game since we have clear button and instructions outline what will happen next that is similar to other software we used in life.
Maybe	- Motivations - Information Processing Style - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering - None of the above	
No	- Motivations - Information Processing Style - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering - None of the above	

5.10   Form 10

Date of evaluation: March 6, 2025
Team: Team 24

Subgoal report form

Use case:

Tim playing the game

Subgoal:

Tim want to exit or restart the game when game over

Will Case:

Will Tim succeed in exiting or restart the game when game over?

Yes ✓	- Motivations ✓ - Information Processing Style ✓ - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering ✓ - None of the above	He will successfully exit the game since the buttons and instructions is clear and the text is not long and complicated.
Maybe	- Motivations - Information Processing Style - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering - None of the above	
No	- Motivations - Information Processing Style - Computer Self-Efficacy - Attitude Towards Risk - Learning: by Process vs. by Tinkering - None of the above	

6   New Requirements

Here is the list of new requirements that we identified based on our Gender-Mag analysis:

- We need to inform the user when there is no other player available to be matched since some users can not figure out what is going on when the matching session becomes unresponsive.

- We need to let the user to be able to exit the game when the game is running with clear button or simple instructions. Currently we don't have these.

7   Reflection Questions

What lesson did you learn from the GenderMag process that you will carry forward to your Software Engineering career?

From all team members: We need to make sure the future software we developed is inclusive to all genders. Previously, we thought that people of all gender processes the information in the same way, but this is actually not the case. We need to design our software with intuitive, clear instructions but not too complex. In this way, we will account for people from all genders. As extended from this, because everybody is build different and sometimes we can not imagine this by ourselves, we also need to learn how to be inclusive in our future software development to account for all people by searching online, asking senior employer, or interviewing our customers.