# Assignment 2

**for**

# MSD Reading Question self-assessment bot

**Version 1.0 approved**

**Prepared by MSD RQ self-assessment bot:**
**Kristina Alyabeva**
**Saveliy Chertkov**
**Kirill Korikov**

**Innopolis University**

**27.10.2024**

# Table of context



# Revision History

| Name | Date | Reason For Changes | Version |
|---|---|---|---|
| Initial version | 27.10.2024 | Requirement elicitation process conducted | Version 1.0 |
| | | | |

# 1. Personas

All following personas are a part of the **Innopolis MSD course**, this is omitted from individual descriptions for the sake of conciseness.

These personas are generalized descriptions of the project stakeholders, defined after personal communication with the fellow students of this course (part of it was done via the questionnaire) and interviews (first interview, second interview, third interview) with the teachers of this course.

Things our team deemed the most important characteristics of the personas are in bold.

1) Neo, 23, master's student. Loves everything **novel** and tries to study diligently, but tends to get **distracted** easily and often takes too much different tasks at a time. Never had issues with writing essays. Has to constantly ask for a **feedback** to improve, but is afraid of taking too much of others' time. Can't afford himself to get **too much C's** for a semester, so puts a lot of effort into writing RQs. Neo wants a tool to **highlight** any mistakes he made in his RQ so he can get a B at least.

2) Dante, 27, master's student. Juggles his work and studying. **Lazy** and wants to do only what's interesting for him. Has no obligations so does only **bare minimum** of what's asked of him. Understands things intuitively, so has difficulties with trying to **explain** them. Wants a tool to tell him what's the bare minimum to do and ideally provide an answers for him.

3) Valeriy, 27, master's student. A **perfectionist**. Dedicates all of his time to studying. Aims only at the **highest possible grades**. **Any mistake** he didn't notice in the submitted work makes him depressed. Stubborn and often disagrees with others. Tends to question every little thing and **argues** a lot. Wants a tool to help him to point out every mistake he missed, and to help him prepare a defense for his points.

4) Pavol, 42, professor. Teaches software engineering for a long time and has **a lot of professional experience** behind him. Wants the students to **actually learn** from the course and **valuable resources** he provides. Popularization of AI made his work more difficult, because students use it to quickly do the work instead of them, so he has to develop new **strategies to combat AI usage**. Wants the students to prove they've actually **read the material** provided. His work usually consists of reading every assignment and checking whether the answer is **relevant** and **justified**. And in case of **appeals** he has to put extra work in checking the works once again. Wants a tool to prevent the students from using AI to get answers and to lower the number of extra work for him.

5) Matej, 29, professor's assistant. Mastership degree at the same course, few years of experience in the field. Assistant job implications indicate him to be **strict** to the point of **questioning every little thing** students write. Really **logical**, expects everything to be

reasonably **proven**. Demands strict adherence to his own **criteria** from the students.

## 2. Use Cases

Figure 1 shows the Use Case diagram.

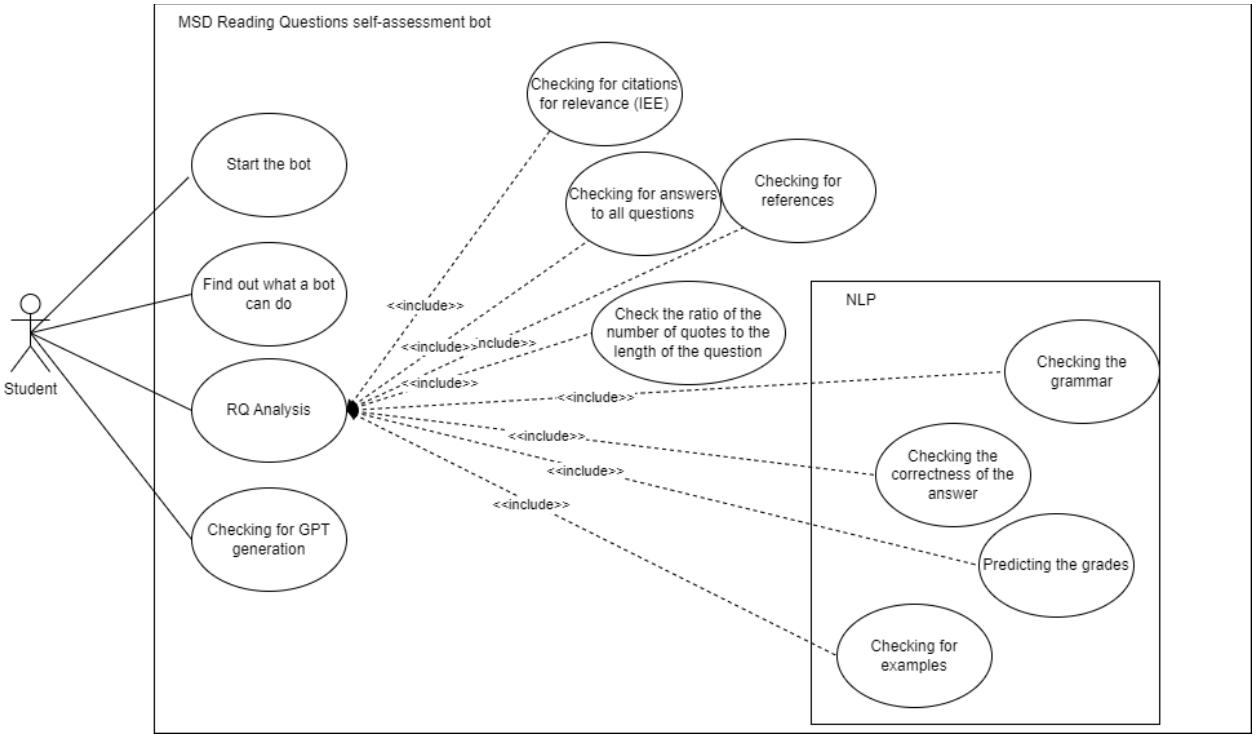


Figure 1 – Use Cases Diagram

Description of Use Cases shows the Table 1 – Table 4.

Table 1 – Description “Start Bot” Use Case

| Use Case Name | **Start the Bot** |
|---|---|
| Actors | MSD Student |
| Pre-conditions | The student wants to start using the bot to check the RQ |
| Flow of events | 1. The student sends the “/start” command to the bot |
| Post-conditions | The student can start working with the bot |

Table 2 – Description “Find out what a bot can do” Use Case

| Use Case Name | **Finde out what a bot can do** |
|---|---|
| Actors | MSD Student |
| Pre-conditions | The student wants to understand how to use the bot |
| Flow of events | 1. The student sends the “/help” command to the bot |
| Post-conditions | The student receives a list of all the commands that the bot executes and a template of the correct format for RQ |

Table 3 – Description “RQ Analysis” Use Case

| Use Case Name | **RQ Analysis** |
|---|---|
| Actors | MSD Student |
| Pre-conditions | The student wants to check the RQ before sending it to moodle |
| Flow of events | 1. The student chooses to “Check the work”<br>2. The student chooses the RQ number<br>3. The student uploads a PDF with the answers to the RQ |
| Post-conditions | The student receives a message from the bot that:<br>• Checking for citations for relevance (IEE)<br>• Checking for answers to all questions<br>• Checking for references<br>• Checking the ratio of the number of quotes to the length of the question<br>• Checking the grammar<br>• Checking the correctness of the answer<br>• Predicting the grades<br>• Checking for examples |

Table 4 – Description “Checking for GPT generation” Use Case

| Use Case Name | **Checking for GPT generation** |
|---|---|
| Actors | MSD Student |
| Pre-conditions | The student used GPT to answer the question and/or to improve grammar in his answer |
| Flow of events | 1. The student chooses to check the work for GPT generation<br>2. The student uploads a PDF with the answers to the RQ |
| Post-conditions | The student receives a percentage (AI or human) |

# 3. User Stories

To compile User stories, we conducted Customer Development among MSD students and tutors.

The results of the student questionnaire.

Also, according to the tutors' garbage, they asked to add the following functions:
- Checking the presence of an example

- Checking citations for relevance (assuming IEEE referencing style)

Based on this, the User Stories were compiled.

- As an MSD student
  I want to **check** my RQ **for GPT generation**
  So that I can avoid getting 0 for the job
- As an MSD student
  I want to **check** my RQ for **answers to all the questions**
  So that I can check if I forgot to answer something or not
- As an MSD student
  I want to **check** my RQ **for references**
  So that I can avoid "source" comments and increase the score for the answer
- As an MSD student
  I want to have a **template for RQ (Standart formating)**
  So that I can simplify the tutor's work
- As a review tutor
  I want to check RQ **for citations for relevance (IEE)**
  So that I can better see where the citations located
- As an MSD student
  I want to **check my RQ for grammar**
  So that I can simplify the tutor's work
- As an review tutor
  I want to check RQ for the **presence of an example**
  So that I can better understand what grade to put for the question
- As an review tutor
  I want to check the **ratio of the number of quotes to the length of the question**
  So that I can check how well the text was read
- As an MSD student
  I want to check my RQ for **predicting the grades**
  So that I can improve the RQ if the grades does not match my expectations
- As an MSD student
  I want to **check** my RQ **for correctness of the answer**
  So that I can see if I understood the question correctly

As a result of communication with the customer, the User Stories implementations were divided into execution priorities shown in Figure 2.

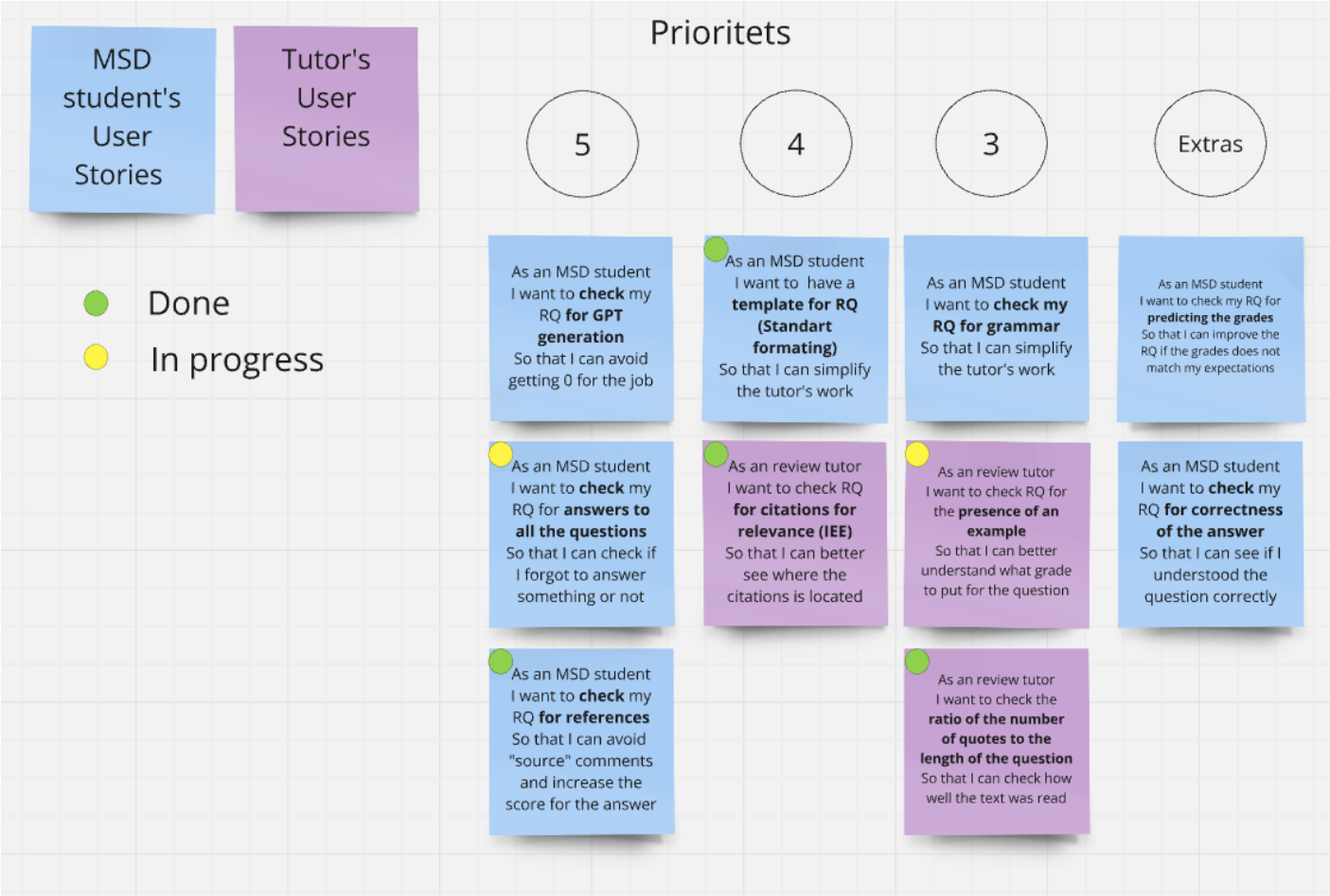


Figure 2 – User Stories