# AMOS-Project 3 – QAchat Planning Documents



AMOS P3 - Planning Document Project Data

| Project Name               |  |
|----------------------------|--|
|                            |  |
| Online team meeting        | https://fau.zoom.us/j/68283073150  |
| Production system (if any) |  |
| Test system (if any)       |  |
| GitHub repository          | amosproj/amos2023ss03-qachat (github.com)  |
| GitHub feature board       | amos2023ss03-feature-board (github.com)  |
| GitHub impediments backlog | amos2023ss03-impediments-backlog (github.com)  |
| Team T-shirt (white)       |  |
| Team T-shirt (black)       | woman design: https://www.shirtinator.de/t-shirts/gestalten/t-shirt-bedrucken#/load/share/931c832c-67cc-46ca-bca7-e49019a052f2 |
| ,                          | man design: https://www.shirtinator.de/t-shirts/gestalten/t-shirt-bedrucken#/load/share/d45e26d4-77f0-42cf-a412-f67b2071facf   |
| Additional materials       |  |
| Course information         | https://amos.uni1.de   |
| Happiness index tool       | https://happy-amos.appspot.com/  |
| Planning Poker             | https://planningpokeronline.com/   |
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AMOS P3 - Planning Document Project Team

| Last Name | First Name | GitHub User Name | Email Address  |
|-----------|------------|------------------|--|
| Alkadour  | Abdelkader | Kadi-7           | a.alkadour@campus.tu-berlin.de, basickadour@gmail.com            |
| Arifin    | Hafidz     | zenzeii          | h.arifin@campus.tu-berlin.de, hafidz.harifin@gmail.com           |
| El Brak   | Sara       | SaraElBrak       | sara.el@fau.de   |
| Erben     | Emanuel    | emuguy1          | emanuel.erben@fau.de, emanuel.erben@gmail.com                    |
| Konheiser | Tobias     | tkonheiser       | tobias.konheiser@fau.de  |
| Stojkovic | Vukica     | vukica1          | vukica.stojkovic@yahoo.de / vukica.stojkovic@campus.tu-berlin.de |
| Nützel    | Felix      | Felix-012        | felix.nuetzel@fau.de   |
| Palarus   | Jesse      | jtshark          | j.palarus@campus.tu-berlin.de, jtsharkjtshark@gmail.com          |
| Pucic     | Amela      | amela16          | a.pucic@campus.tu-berlin.de, amela1999@hotmail.de                |
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AMOS P3 - Planning Document

Role Assignments

| #  | Meeting Day | Product Owner                  | Software Developer | Release Manager | Scrum Master     | Comment       |
|----|-------------|--------------------------------|--------------------|-----------------|------------------|---------------|
| 1  | 2022-10-19  | Tobias Konheiser, Sara El Brak | Everyone else      | Emanuel Erben   | Vukica Stojkovic |               |
| 2  | 2022-10-26  | Sara El Brak, Tobias Konheiser | Everyone else      | Emanuel Erben   | Vukica Stojkovic |               |
| 3  | 2022-11-02  | Tobias Konheiser, Sara El Brak | Everyone else      | Emanuel Erben   | Vukica Stojkovic |               |
| 4  | 2022-11-09  | Sara El Brak, Tobias Konheiser | Everyone else      | Emanuel Erben   | Vukica Stojkovic |               |
| 5  | 2022-11-16  | Tobias Konheiser, Sara El Brak | Everyone else      | Emanuel Erben   | Vukica Stojkovic |               |
| 6  | 2022-11-23  | Sara El Brak, Tobias Konheiser | Everyone else      | Emanuel Erben   | Vukica Stojkovic |               |
| 7  | 2022-11-30  | Tobias Konheiser, Sara El Brak | Everyone else      | Emanuel Erben   | Vukica Stojkovic | Mid-term due  |
| 8  | 2022-12-07  | Sara El Brak, Tobias Konheiser | Everyone else      | Emanuel Erben   | Vukica Stojkovic |               |
| 9  | 2022-12-14  | Tobias Konheiser, Sara El Brak | Everyone else      | Emanuel Erben   | Vukica Stojkovic |               |
| 10 | 2023-01-11  | Sara El Brak, Tobias Konheiser | Everyone else      | Emanuel Erben   | Vukica Stojkovic |               |
| 11 | 2023-01-18  | Tobias Konheiser, Sara El Brak | Everyone else      | Emanuel Erben   | Vukica Stojkovic |               |
| 12 | 2023-01-25  | Sara El Brak, Tobias Konheiser | Everyone else      | Emanuel Erben   | Vukica Stojkovic |               |
| 13 | 2023-02-01  | Tobias Konheiser, Sara El Brak | Everyone else      | Emanuel Erben   | Vukica Stojkovic |               |
| 14 | 2023-02-08  | Sara El Brak, Tobias Konheiser | Everyone else      | Emanuel Erben   | Vukica Stojkovic | Demo day!     |
| 15 | 2023-02-15  | Tobias Konheiser, Sara El Brak | Everyone else      | Emanuel Erben   | Vukica Stojkovic | Retrospective |
|    |             |                                |                    |                 |                  |               |
|    |             |                                |                    |                 |                  |               |
|    |             |                                |                    |                 |                  |               |

AMOS P3 - Planning Document Team Contract

| Goals                   | Develop a good quality and working Chatbot based on defined requirements                            |
|-------------------------|---|
|                         | Achieve the technical target in good atmosphere and clear communication                             |
| Meeting norms           | Meeting topics are inserted in the agenda before the meeting starts                                 |
| -                       | Everybody aims to be on time, but being late is communicated beforehand and handled in an agile way |
|                         | Meeting topics need to be sharp and precise   |
|                         | Meeting time must no be exceeded more than 30 min, otherwise schedule a new meeting                 |
| Working norms           | We value quality over quantity  |
|                         | Everyone contributes regularly and communicates openly  |
| Coordination norms      | Everyone sticks to their roles and in case of problems communicates                                 |
| Communication norms     | We shock our communication channels at least once a day   |
| Communication norms     | We check our communication channels at least once a day   |
| Consideration norms     | Important messages are send in our WhatsApp group   |
| Consideration norms     | We discuss disagreement openly We vote for a final resolution                                       |
|                         |   |
| 0                       | We help in case someone needs it  |
| Cont. improvement norms | Happiness index and stand up emails are reviewed in team meeting                                    |
|                         | If problmes are recognized escalate them to the team  |
| Rewards                 | Online team event   |
|                         | Everyone celebrates via a reaction in the zoom chat after each sprint                               |
| Sanctions               | Assign unwanted jobs to person (rework a file,)   |
| Signatures              | Tobias Konheiser  |
|                         | Hafidz Arifin   |
|                         | Amela Pucic   |
|                         | Emanuel Erben   |
|                         | Sara El Brak  |
|                         | Jesse Palarus   |
|                         | Felix Nützel  |
|                         | Abdelkader Alkadour   |
|                         | Vukica Stojkovic  |

AMOS P3 - Planning Document Product Goal

| Product Vision Project Mission   |   |
|--|---|
| QAchat envisions an environment in which access to knowledge is just a message away. We aim to leverage the rapid advancement in language model technologies to create a seamless interface that enables employees to get their questions answered accurately, quickly, efficiently, and with ease - by a general language model that is | LLMs to create a chatbot that provides users with ic answers to their questions - with a focus on est suited network is trained on provided data that atton and documentation sources. The model is lackbot integration, where questions can be |

AMOS P3 - Planning Document Product Glossary

| Term                                    | Definition  |
|---|---|
| Administrator (Admin)                   | An Administrator is a person who has access to all parts of the project.  |
| Application Programming Interface (API) | An API is a defined interface that applications can use to exchange data and information.   |
| Artificial Intelligence (AI)            | Artificial Intelligence is a field of research that aims to make computers think and act like humans.   |
| BERT                                    | BERT is an open source LLM that has been developed by Google.   |
| Chatbot                                 | A chatbot is an application that can communicate with a user through short text messages and answer questions using artificial intelligence.                              |
| Company-Internal Information            | Company-Internal Information is information about the company and its projects and processes that is publicly available or stored in Confluence, Slack, and Google Drive. |
| Confluence                              | Confluence is a software used to document various types of data.  |
| Google Drive                            | Google Drive is a cloud storage solution provided by Google.  |
| Large Language Model (LLM)              | A Large Language Model is an Al model specialized for text and sentence generation.   |
| LLaMA                                   | LLaMA is an open source LLM that has been developed by Meta and Stanford.   |
| Slack                                   | Slack is a software that is used for text messaging between groups or individuals.  |
| Slackbot                                | A Slackbot is a chatbot that is integrated into Slack.  |
| T5                                      | T5 is an open source LLM that has been developed by Google.   |
| User                                    | A user is a person who interacts with the system by chatting with the Slackbot.   |
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AMOS P3 - Planning Document

Mid-Project Release plan

| Sprint  | Theme                    | Goal  | Feature Name   | Est. Size | Est.<br>Remaining | Real Size | Real<br>Remaining |
|---------|--------------------------|---|--|-----------|-------------------|-----------|-------------------|
| Releas  | e                        |   |  |           |                   |           |                   |
|         |                          |   |  |           |                   |           |                   |
|         | Total                    |   |  | 164       | 164               |           |                   |
| prints  | 3                        |   |  |           |                   |           |                   |
|         | Large Language Model n   | nethods   |  | 28        | 164               | 28        | 16                |
|         | Software architecture    |   |  | 29        |                   | 26        |                   |
|         | Large Language Model p   | prototypes  |  | 26        |                   | 23        |                   |
|         | Code frameworks          |   |  | 28        |                   | 26        |                   |
|         | Setup & Documentation    |   |  | 27        |                   | 33        |                   |
| 5       | Data Integration & Docur | mentation Enhancement   |  | 26        | 26                | 28        | 2                 |
| Feature | es                       |   |  |           |                   |           |                   |
|         |                          | nothodo   |  |           |                   |           |                   |
| l       | Large Language Model n   | Identify the existing capabilities of LLM methods and their underlying algorithms   |  |           |                   |           |                   |
|         |                          | identity the existing capabilities of LLIVI methods and their underlying algorithms | Research Slack bot requirement                       | 5         |                   | 5         |                   |
|         |                          |   | Research LLM models                                  | 5         |                   | 5         |                   |
|         |                          |   | Research LLM method 1 (search API) properties        | 5         |                   | 5         |                   |
|         |                          |   | Research LLM method 2 (semantic search) properties   | 5         |                   | 5         |                   |
|         |                          |   | Research LLM method 3 (fine tuning) properties       | 5         |                   | 5         |                   |
|         |                          |   | Team logo design                                     | 3         |                   | 3         |                   |
| 2       | Software architecture    |   | roum rogo doorg.n                                    |           |                   |           |                   |
|         |                          | Determine the software architecture and the used components                         |  |           |                   |           |                   |
|         |                          |   | Define diagram of runtime components                 | 5         |                   | 5         |                   |
|         |                          |   | Define diagram of code components                    | 8         |                   | 8         |                   |
|         |                          |   | A summary of the underlying technology stack         | 5         |                   | 3         |                   |
|         |                          |   | Textual explanation of the diagrams and choices      | 5         |                   | 5         |                   |
|         |                          |   | Initialize code repository                           | 3         |                   | 3         |                   |
|         |                          |   | Initialize the software bill of materials            | 3         |                   | 2         |                   |
| 3       | Large Language Model p   | prototypes  |  |           |                   |           |                   |
|         |                          | Further evaluate the functionality of each LLM method                               |  |           |                   |           |                   |
|         |                          |   | Research semantic search vector storage              | 5         |                   | 3         |                   |
|         |                          |   | Research Slack web server hosting                    | 5         |                   | 3         |                   |
|         |                          |   | Implement Alpaca/LLaMA LLM prototype                 | 3         |                   | 5         |                   |
|         |                          |   | Implement BERT LLM prototype                         | 5         |                   | 3         |                   |
|         |                          |   | Implement T5 LLM prototype                           | 3         |                   | 3         |                   |
|         |                          |   | Create the LLM-server code framework                 | 3         |                   | 5         |                   |
|         |                          |   | Create coding guidelines                             | 2         |                   | 1         |                   |
| ļ       | Code frameworks          |   |  |           |                   |           |                   |
|         |                          | Provide a structured foundation for building the chatbot                            | Danasah IIM asasah akira                             | _         |                   | _         |                   |
|         |                          |   | Research LLM server hosting                          | 5         |                   | 5         |                   |
|         |                          |   | Determine the communication protocols used           | 3         |                   | 3         |                   |
|         |                          |   | Create Slack bot code framework                      | 5         |                   | 3         |                   |
|         |                          |   | Create the semantic search code framework            | 3         |                   | 5         |                   |
|         |                          |   | Create the data processing code framework            | 3         |                   | 2         |                   |
|         |                          |   | Update product vision and product mission Test Slack | 3         |                   | 2         |                   |
|         |                          |   |  |           |                   |           |                   |
| 5       | Setup & Documentation    |   | Test DeepL API                                       | 3         |                   | 3         |                   |

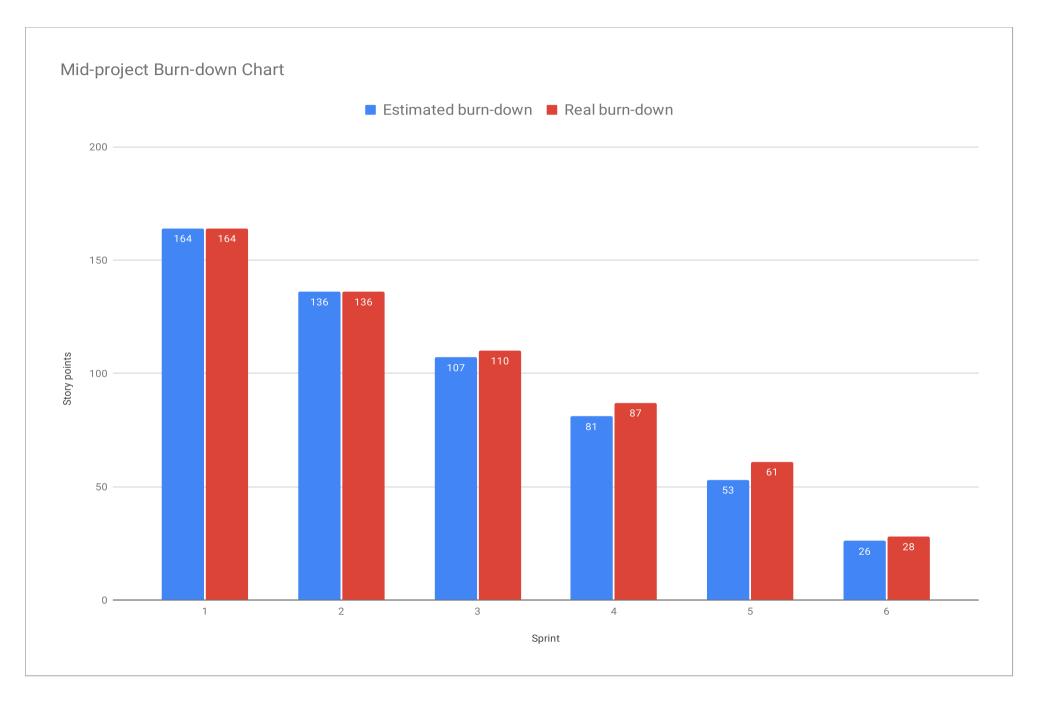
AMOS P3 - Planning Document

Mid-Project Release plan

| Sprint | Theme              | Goal  | Feature Name  | Est. Size | Est.<br>Remaining | Real Size | Real<br>Remaining |
|--------|--------------------|---|---|-----------|-------------------|-----------|-------------------|
|        |                    | Prepare the necessary setups and extend the documentation               |   |           |                   |           |                   |
|        |                    |   | Create a build process video  | 5         |                   | 8         | 3                 |
|        |                    |   | Create a secure and private file exchange channel                     | 3         |                   | 3         | \$                |
|        |                    |   | Create testing setup  | 5         |                   | 8         | 3                 |
|        |                    |   | Set up vector database  | 2         |                   | 2         | 2                 |
|        |                    |   | Set up LLM for embedding generation                                   | 2         |                   | 2         | 2                 |
|        |                    |   | Move existing documentation to GitHub Wiki                            | 5         |                   | 5         | j                 |
|        |                    |   | Document Slackbot setup process                                       | 2         |                   | 2         | 2                 |
|        |                    |   | Set up LLM for chat message generation                                | 3         |                   | 3         | 3                 |
| 6      | Data Integration & | Documentation Enhancement   |   |           |                   |           |                   |
|        |                    | Enhance data integration capabilities and improve project documentation |   |           |                   |           |                   |
|        |                    |   | Setup LLM in the Google could   | 8         |                   | 8         | 3                 |
|        |                    |   | Implement a blacklist for Confluence pages and other data sources     | 3         |                   | 3         | 3                 |
|        |                    |   | Read data from Confluence into vector database                        | 5         |                   | 5         | <b>j</b>          |
|        |                    |   | Read data from PDF into vector database                               | 3         |                   | 5         | ;                 |
|        |                    |   | Initialize user, (technical) design, and build/deploy documentation   | 5         |                   | 5         | j                 |
|        |                    |   | Clean-up mid-project release plan & create final project release plan | 2         |                   | 2         | ,                 |

AMOS P3 - Planning Document

Mid-project Burn-down



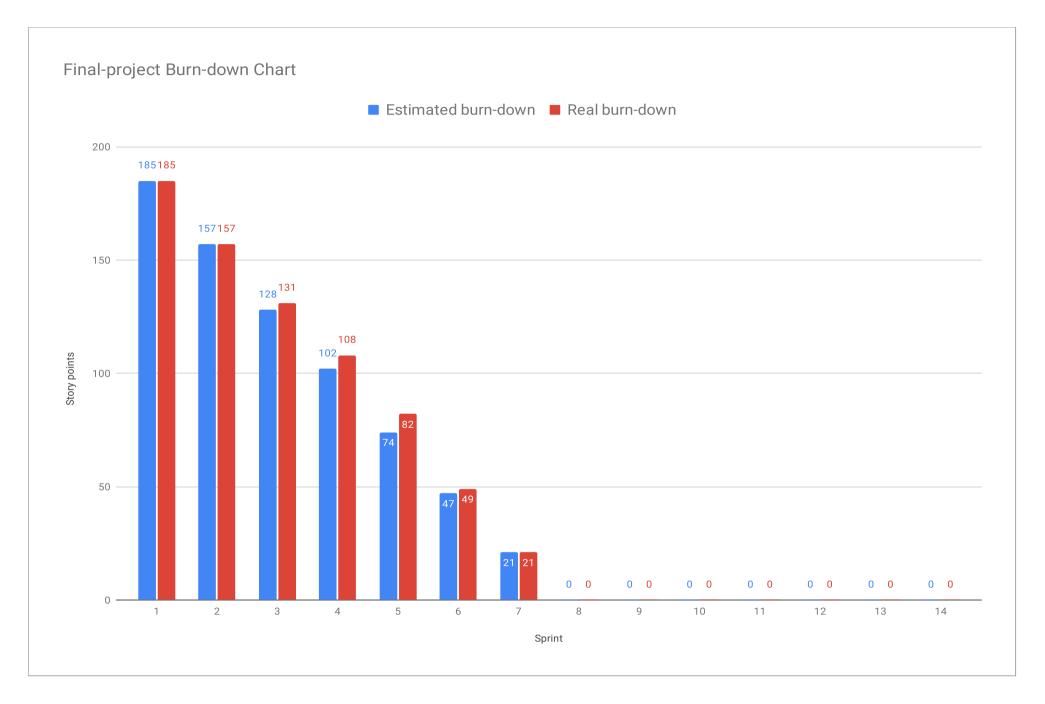
AMOS P3 - Planning Document Final Project Release plan

| Sprint   | Theme       | Goal  | Feature Name  | Est. Size | Est.<br>Remaining | Real Size | Real<br>Remaining |
|----------|-------------|---|---|-----------|-------------------|-----------|-------------------|
| Releas   | e           |   |   |           |                   |           |                   |
|          |             |   |   |           |                   |           |                   |
|          | Total       |   |   | 185       | 185               |           |                   |
| Sprints  |             |   |   |           |                   |           |                   |
| opriiits | 1           |   |   |           |                   |           |                   |
| 1        | Large Lang  | uage Model methods  |   | 28        | 185               | 28        | 185               |
| 2        | Software an | chitecture  |   | 29        |                   |           |                   |
| 3        |             | uage Model prototypes   |   | 26        | 128               |           |                   |
| 4        | Code frame  | eworks  |   | 28        |                   |           |                   |
| 5        |             | cumentation   |   | 27        |                   |           |                   |
| 6        | Data Integr | ation & Documentation Enhancement   |   | 26        |                   | 28        |                   |
| 7        | Cloud Host  | ing & Data Integration  |   | 21        |                   |           | 21                |
| 8        |             |   |   |           | 0                 |           | 0                 |
| 9        |             |   |   |           | 0                 |           | 0                 |
| 10       |             |   |   |           | 0                 |           | 0                 |
| 11       |             |   |   |           | 0                 |           | 0                 |
| 12       |             |   |   |           | 0                 |           | 0                 |
| 13       |             |   |   |           | 0                 |           | 0                 |
| 14       |             |   |   |           | 0                 |           | 0                 |
| Feature  | es          |   |   |           |                   |           |                   |
|          |             |   |   |           |                   |           |                   |
| 1        | Large Lang  | uage Model methods  |   |           |                   |           |                   |
|          |             | Identify the existing capabilities of LLM methods and their underlying algorithms |   |           |                   |           |                   |
|          |             |   | Research Slack bot requirement  | 5         |                   | 5         |                   |
|          |             |   | Research LLM models   | 5         |                   | 5         |                   |
|          |             |   | Research LLM method 1 (search API) properties                           | 5         |                   | 5         |                   |
|          |             |   | Research LLM method 2 (semantic search) properties                      | 5         |                   | 5         |                   |
|          |             |   | Research LLM method 3 (fine tuning) properties                          | 5         |                   | 5         |                   |
| _        |             | 19. 4   | Team logo design  | 3         |                   | 3         |                   |
| 2        | Software an |   |   |           |                   |           |                   |
|          |             | Determine the software architecture and the used components                       | Define diagram of runtime components                                    | 5         |                   | 5         |                   |
|          |             |   | Define diagram of runtime components  Define diagram of code components | 8         |                   | 8         |                   |
|          |             |   | A summary of the underlying technology stack                            | 5         |                   | 3         |                   |
|          |             |   | Textual explanation of the diagrams and choices                         | 5         |                   | 5         |                   |
|          |             |   | Initialize code repository  | 3         |                   | 3         |                   |
|          |             |   | Initialize code repository  Initialize the software bill of materials   | 3         |                   | 2         |                   |
| 3        | Large Lang  | uage Model prototypes   | militanzo dio contrato dili di materialo                                |           |                   |           |                   |
| -        |             | Further evaluate the functionality of each LLM method                             |   |           |                   |           |                   |
|          |             |   | Research semantic search vector storage                                 | 5         |                   | 3         |                   |
|          |             |   | Research Slack web server hosting                                       | 5         |                   | 3         |                   |
|          |             |   | Implement Alpaca/LLaMA LLM prototype                                    | 3         |                   | 5         |                   |
|          |             |   | Implement BERT LLM prototype  | 5         |                   | 3         |                   |
|          |             |   | Implement T5 LLM prototype  | 3         |                   | 3         |                   |
|          |             |   | Create the LLM-server code framework                                    | 3         |                   | 5         |                   |
|          |             |   | Create coding guidelines  | 2         |                   | 1         |                   |

AMOS P3 - Planning Document Final Project Release plan

| Sprint | Theme       | Goal  | Feature Name  | Est. Size | Est.<br>Remaining | Real Size | Real<br>Remaining |
|--------|-------------|---|---|-----------|-------------------|-----------|-------------------|
| 4      | Code frame  | eworks  |   |           |                   |           |                   |
|        |             | Provide a structured foundation for building the chatbot                      |   |           |                   |           |                   |
|        |             |   | Research LLM server hosting   | 5         |                   | 5         |                   |
|        |             |   | Determine the communication protocols used                            | 3         |                   | 3         |                   |
|        |             |   | Create Slack bot code framework                                       | 5         |                   | 3         |                   |
|        |             |   | Create the semantic search code framework                             | 3         |                   | 3         |                   |
|        |             |   | Create the data processing code framework                             | 3         |                   | 5         |                   |
|        |             |   | Update product vision and product mission                             | 3         |                   | 2         |                   |
|        |             |   | Test Slack  | 3         |                   | 2         |                   |
|        |             |   | Test DeepL API  | 3         |                   | 3         |                   |
| 5      | Setup & Do  | cumentation   |   |           |                   |           |                   |
|        |             | Prepare the necessary setups and extend the documentation                     |   |           |                   |           |                   |
|        |             |   | Create a build process video  | 5         |                   | 8         |                   |
|        |             |   | Create a secure and private file exchange channel                     | 3         |                   | 3         |                   |
|        |             |   | Create testing setup  | 5         |                   | 8         |                   |
|        |             |   | Set up vector database  | 2         |                   | 2         |                   |
|        |             |   | Set up LLM for embedding generation                                   | 2         |                   | 2         |                   |
|        |             |   | Move existing documentation to GitHub Wiki                            | 5         |                   | 5         |                   |
|        |             |   | Document Slackbot setup process                                       | 2         |                   | 2         |                   |
|        |             |   | Set up LLM for chat message generation                                | 3         |                   | 3         |                   |
| 6      | Data Integr | ation & Documentation Enhancement   | Cot up == or or at moodage generation                                 |           |                   |           |                   |
| •      | Data intogr | Enhance data integration capabilities and improve project documentation       |   |           |                   |           |                   |
|        |             | Elinarios data integration supubilities and improve project desarromation     | Setup LLM in the Google could   | 8         |                   | 8         |                   |
|        |             |   | Implement a blacklist for Confluence pages and other data sources     | 3         |                   | 3         |                   |
|        |             |   | Read data from Confluence into vector database                        | 5         |                   | 5         |                   |
|        |             |   | Read data from PDF into vector database                               | 3         |                   | 5         |                   |
|        |             |   | Initialize user, (technical) design, and build/deploy documentation   | 5         |                   | 5         |                   |
|        |             |   | Clean-up mid-project release plan & create final project release plan | 2         |                   | 2         |                   |
| 7      | Cloud Host  | ing & Data Integration  | Olean-up mid-project release plan & create final project release plan |           |                   |           |                   |
| •      | Oloud Hos   | Establish cloud hosting of the software and expand data integration abilities |   |           |                   |           |                   |
|        |             | Establish cloud hosting of the software and expand data integration abilities | Setup LLM in the Google could   | 5         |                   |           |                   |
|        |             |   | Read data from Confluence into vector database                        | 3         |                   |           |                   |
|        |             |   | Document and summarise all services available to the project team     | 2         |                   |           |                   |
|        |             |   | Read data from Slack conversation into vector database                | 5         |                   |           |                   |
|        |             |   | Detect Slackbot language  | 3         |                   |           |                   |
|        |             |   | Create integration tests for database reading and writing             | 3         |                   |           |                   |
|        |             |   | Create integration tests for database reading and writing             | 3         |                   |           |                   |
|        |             |   |   |           |                   |           |                   |
|        |             |   |   |           |                   |           |                   |
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|        |             |   |   |           |                   |           |                   |
|        |             |   |   |           |                   |           |                   |

AMOS P3 - Planning Document Final-project Burn-down



AMOS P3 - Planning Document Definition of Done

| #  | Feature Definition of Done  | Sprint Release Definition of Done   | Project Release Definition of Done                  |
|----|---|---|---|
| 10 | Acceptance criteria are met.  |   |   |
| 11 | Work products are uploaded to the Github repository.                |   |   |
| 12 | A pull request is created for each related branch.                  |   |   |
| 13 | The work products in the pull requests are reviewed.                |   |   |
| 14 | The corresponding branches are merged and closed.                   |   |   |
| 15 | The bill of materials section of the planning documents is updated. |   |   |
| 16 | All defined conventions are complied with.                          |   |   |
| 21 |   | A release candidate with a working and meaningful increment to the previous sprint is tagged. |   |
| 22 |   | Previously established features and security mechanisms must continue to work.                |   |
| 23 |   |   |   |
| 31 |   |   | The project can be successfully built and deployed. |
| 32 |   |   | All created tests are passed.                       |
| 34 |   |   | The implemented features pass a simple user test.   |
| 35 |   |   | Developer documentation is created.                 |
| 36 |   |   | User documentation is created and updated           |
| 37 |   |   | The release has been approved by all team members   |
|    |   |   |   |
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AMOS P3 - Planning Document Documentation

| Type                | Link / reference   |
|---------------------|--|
| Team Meeting Agenda | Team Meeting Agenda  |
| Checklists          | https://docs.google.com/spreadsheets/d/1K46ImoocSKWYXWQgVVGndU6QzNazhF-i7bsbbovnpMk/edit?usp=sharing |
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AMOS P3 - Planning Document

Bill of Materials

| #  | Context               | Name                 | Version  | License                            | Comment  |
|----|-----------------------|----------------------|----------|------------------------------------|--|
| 1  |                       | python               | 3.8      | Python License 2.0.1               |  |
| 2  | supabase              | supabase             | 1.0.3    | MIT License                        |  |
| 3  | llama-cpp-python      | llama                | 0.1.39   | MIT License                        |  |
| 4  | langchain             | langchain            | 0.0.154  | MIT License                        |  |
| 5  | slack_sdk             | Slack API            | 3.21.3   | MIT License                        |  |
| 6  | openai                | OpenAi               | 0.27.5   | MIT License                        |  |
| 7  | atlassian-python-api  | atlassian-python-api | 3.36.0   | Apache License 2.0                 |  |
| 8  | selenium              | selenium             | 4.9.0    | Apache License 2.0                 |  |
| 9  | numpy                 | numpy                | 1.24.3   | BSD License (BSD-3-Clause)         |  |
| 10 | pandas                | pandas               | 2.0.1    | BSD License (BSD-3-Clause)         |  |
| 11 | aleph-alpha-client    | Aleph-Alpha          | 3.1.0    | MIT License                        |  |
| 12 | sentence_transformers |                      | 2.2.2    | Apache License 2.0                 |  |
| 13 | InstructorEmbedding   |                      | 1.0.0    | MIT License                        |  |
| 14 | slack-bolt            | Slack Bolt           | 1.18.0   | MIT License                        |  |
| 15 | slack-sdk             | Slack SDK            | 3.21.3   | MIT License                        |  |
| 16 | deepl                 | DeepL API            | 1.14.0   | MIT License                        |  |
| 17 | python-dotenv         |                      | 1.0.0    | BSD License (BSD-3-Clause)         |  |
| 18 | huggingface_hub       |                      | 0.14.1   | Apache Software License            |  |
| 19 | typing-inspect        |                      | 0.8.0    | MIT License                        |  |
| 20 | typing_extensions     |                      | 4.5.0    | Python Software Foundation License |  |
| 21 | pytest                |                      | 7.3.1    | MIT License                        |  |
| 22 | pdfminer.six          | PDFMiner             | 20221105 | MIT License                        |  |
| 23 | pytorch               |                      |          |                                    |  |
|    | transormers           |                      |          |                                    |  |
| 25 | nltk                  |                      |          |                                    |  |
| 26 | pytesseract           |                      |          |                                    | image analysis. Tesseract needs to be installed an dpath added |

AMOS P3 - Planning Document Planning Poker

| Last Name | First Name | Value |      |                  |  |
|-----------|------------|-------|------|------------------|--|
| Alkadour  | Abdelkader | 0     |      |                  |  |
| Arifin    | Hafidz     | 0     | 0.00 | OK               |  |
| El Brak   | Sara       |       | 0100 |                  |  |
| Erben     | Emanuel    | 0     |      |                  |  |
| Konheiser | Tobias     |       | 0    | No size          |  |
| Stojkovic | Vukica     |       | 1    | Trivial size     |  |
| Nützel    | Felix      | 0     | 2    | Small size       |  |
| Palarus   | Jesse      | 0     | 3    | Medium size      |  |
| Pucic     | Amela      | 0     | 5    | Large size       |  |
|           |            |       | 8    | Very large size  |  |
|           |            |       | 13   | Too large (size) |  |
|           |            |       |      |                  |  |
|           |            |       |      |                  |  |
|           |            |       |      |                  |  |
|           |            |       |      |                  |  |
|           |            |       |      |                  |  |
|           |            |       |      |                  |  |
|           |            |       |      |                  |  |

# **Additional Documentation**

# Team Meeting Agenda "AMOS QAchat"

Date: 2023\_06\_07

| ID | Topic                | Time | Author    | Description   | Result | Decision | Responsible |
|----|----------------------|------|-----------|---|--------|----------|-------------|
| 1  | Sprint Review        | 30   | PO        | Release Manager creates release candidate build     PO walks through "awaiting review" tickets, probing SDs                             |        |          |             |
| 2  | Sprint Release       | 5    | PO        | - PO decides release<br>- Release Manager creates release   |        |          |             |
| 3  | Sprint Retrospective | 15   | SM        | - SM reviews the impediments - SM performs roll calls - Everyone answers happiness index - Review of Happiness index and standup emails |        |          |             |
| 4  | Sprint Planning      | 30   | РО        | PO works through product backlog     SD perform planning poker     Introduce sprint goal  |        |          |             |
| 5  | NDA signing          | 1    | Everyone  | Reminder  |        |          |             |
| 6  |                      |      |           |   |        |          |             |
| 7  |                      |      |           |   |        |          |             |
| 8  |                      |      |           |   |        |          |             |
| 9  |                      |      |           |   |        |          |             |
| 10 | Open Points          | 5    | Everybody |   |        |          |             |
|    |                      | 86   |           |   |        |          |             |

1

Team Meeting Agenda 2023\_06\_05\_QAware

### Team Meeting Agenda "AMOS QAchat"

5 comments from Sebastian

6 ToDo

8 10

Topic Time Author Description Result Decision Responsible Confluence Data Reading 1 Demonstration 10 Hafidz short demo of current process for Confluence data extraction 2 Cloud Hosting Demonstration 10 Jesse demo of Google Cloud hosting structure 3 questions from Sebastian 10 Google Docs contain a lot of information In which form should Slack channels be scrapped -> add scrapper to channel 4 questions to Sebastian https://huggingface.co/spaces/HuggingFaceH4/open\_llm\_leaderboard https://www.terraform.io/

35

sign NBA

# Team Meeting Agenda "AMOS QAchat"

Date: 2023\_05\_31

| ID | Topic                  | Time | Author    | Description   | Result | Decision | Responsible |
|----|------------------------|------|-----------|---|--------|----------|-------------|
| 1  | Sprint Review          | 30   | PO        | Release Manager creates release candidate build     PO walks through "awaiting review" tickets, probing SDs                             |        |          |             |
| 2  | Sprint Release         | 5    | PO        | - PO decides release<br>- Release Manager creates release and<br>mid project tag  |        |          |             |
| 3  | Sprint Retrospective   | 15   | SM        | - SM reviews the impediments - SM performs roll calls - Everyone answers happiness index - Review of Happiness index and standup emails |        |          |             |
| 4  | Sprint Planning        | 30   | PO        | - PO works through product backlog - SD perform planning poker  |        |          |             |
| 5  | Branch Protection Rule | 5    | Emanuel   |   |        |          |             |
| 6  |                        |      |           |   |        |          |             |
| 7  |                        |      |           |   |        |          |             |
| 8  |                        |      |           |   |        |          |             |
| 9  |                        |      |           |   |        |          |             |
| 10 | Open Points            | 5    | Everybody |   |        |          |             |
|    | •                      | 90   |           |   |        | •        |             |

3

# Team Meeting Agenda "AMOS QAchat"

Date: 2023\_05\_24

| ID | Topic                | Time | Author    | Description   | Result | Decision | Responsible |
|----|----------------------|------|-----------|---|--------|----------|-------------|
| 1  | Sprint Review        | 30   | PO        | Release Manager creates release candidate build     PO walks through "awaiting review" tickets, probing SDs                             |        |          |             |
| 2  | Sprint Release       | 5    | PO        | - PO decides release<br>- Release Manager creates release   |        |          |             |
| 3  | Sprint Retrospective | 15   | SM        | - SM reviews the impediments - SM performs roll calls - Everyone answers happiness index - Review of Happiness index and standup emails |        |          |             |
| 4  | Sprint Planning      | 30   | РО        | - PO works through product backlog - SD perform planning poker  |        |          |             |
| 5  |                      |      |           |   |        |          |             |
| 6  |                      |      |           |   |        |          |             |
| 7  |                      |      |           |   |        |          |             |
| 8  |                      |      |           |   |        |          |             |
| 9  |                      |      |           |   |        |          |             |
| 10 | Open Points          | 5    | Everybody |   |        |          |             |
|    |                      | 85   |           |   |        |          |             |

4

Team Meeting Agenda 2023 05 22 QAware

### Team Meeting Agenda "AMOS QAchat"

Topic Time Author Description Result Decision Responsible demonstration of current 1 state 10 10 TBD 2 questions from Sebastian - About the NDA: Shoud we plan for real data or create dummy data?
- Which datatypes should be supported (PDF, Docx, HTML, Confluence, Slack)? - NDA for real data - focus on Confluence, Slack General - Who will be allowed to add data to the database?
- Which interface (CLI, GUI) should be created for data ingestion? channel would be gread
- automatic database update with blacklist 3 questions to Sebastian 10 Tobi - should there be a IAM or sth like this for the data when the user ask a question - in which language should the ChatBot answer (always german???) 4 questions to Sebastian 20 Team - language change would be nice to have 5 10 50

# Team Meeting Agenda "AMOS QAchat"

| ID | Topic                | Time | Author      | Description   | Result | Decision | Responsible |
|----|----------------------|------|-------------|---|--------|----------|-------------|
| 1  | Sprint Review        | 30   | PO          | - Release Manager creates release candidate build - PO walks through "awaiting review" tickets, probing SDs                             |        |          |             |
| 2  | Sprint Release       | 5    | PO          | - PO decides release<br>- Release Manager creates release   |        |          |             |
| 3  | Sprint Retrospective | 15   | SM          | - SM reviews the impediments - SM performs roll calls - Everyone answers happiness index - Review of Happiness index and standup emails |        |          |             |
| 4  | Sprint Planning      | 30   | PO          | - PO works through product backlog<br>- SD perform planning poker   |        |          |             |
| 5  | Definition of Done   | 5    | Tobi + Sara | agree on project specific DoD   |        |          |             |
| 6  |                      |      |             |   |        |          |             |
| 7  |                      |      |             |   |        |          |             |
| 8  |                      |      |             |   |        |          |             |
| 9  |                      |      |             |   |        |          |             |
| 10 | Open Points          | 5    | Everybody   |   |        |          |             |
|    |                      | 90   |             | -   |        |          |             |

# Team Meeting Agenda "AMOS QAchat"

| ID | Topic                | Time | Author      | Description   | Result | Decision | Responsible |
|----|----------------------|------|-------------|---|--------|----------|-------------|
| 1  | Sprint Review        | 30   | PO          | - Release Manager creates release candidate build - PO walks through "awaiting review" tickets, probing SDs                             |        |          |             |
| 2  | Sprint Release       | 5    | PO          | - PO decides release<br>- Release Manager creates release   |        |          |             |
| 3  | Sprint Retrospective | 15   | SM          | - SM reviews the impediments - SM performs roll calls - Everyone answers happiness index - Review of Happiness index and standup emails |        |          |             |
| 4  | Sprint Planning      | 30   | PO          | - PO works through product backlog<br>- SD perform planning poker   |        |          |             |
| 5  | Definition of Done   | 3    | Tobi + Sara | agree on project specific DoD   |        |          |             |
| 6  | Sprint Goal          | 2    | Tobi + Sara | agree on sprint goal  |        |          |             |
| 7  |                      |      |             |   |        |          |             |
| 8  |                      |      |             |   |        |          |             |
| 9  |                      |      |             |   |        |          |             |
| 10 | Open Points          | 5    | Everybody   |   |        |          |             |
|    | •                    | 90   |             |   | •      |          |             |

# Team Meeting Agenda "AMOS QAchat"

Date: 2023\_05\_03

| ID | Topic                | Time | Author      | Description   | Result | Decision                                      | Responsible |
|----|----------------------|------|-------------|---|--------|---|-------------|
| 1  | Sprint Review        | 30   | PO          | - Release Manager creates release candidate build - PO walks through "awaiting review" tickets, probing SDs                             |        |   |             |
| 2  | Sprint Release       | 5    | PO          | - PO decides release<br>- Release Manager creates release   |        |   |             |
| 3  | Sprint Retrospective | 15   | SM          | - SM reviews the impediments - SM performs roll calls - Everyone answers happiness index - Review of Happiness index and standup emails |        |   |             |
| 4  | Sprint Planning      | 30   | PO          | - PO works through product backlog<br>- SD perform planning poker   |        |   |             |
| 5  | Stand up Emails      | 2    | Tobi + Sara | please write your standup emails regularly  |        | first standup email is sent by sunday evening |             |
| 7  |                      |      |             |   |        |   |             |
| 8  |                      |      |             |   |        |   |             |
| 9  |                      |      |             |   |        |   |             |
| 10 | Open Points          | 10   | Everybody   |   |        |   |             |
|    |                      | 92   |             |   |        |   |             |

8

# Team Meeting Agenda "AMOS QAchat"

Date: 2023\_04\_26

| ID | Topic                  | Time | Author    | Description   | Result | Decision   | Responsible |
|----|------------------------|------|-----------|---|--------|--|-------------|
| 1  | Sprint Review          | 30   | РО        | Release Manager creates release candidate build     PO walks through "awaiting review" tickets, probing SDs                             |        | Method 2: semantic search a Google Open Source model |             |
| 2  | Sprint Release         | 5    | PO        | - PO decides release<br>- Release Manager creates release   |        | released   |             |
| 3  | Sprint Retrospective   | 15   | SM        | - SM reviews the impediments - SM performs roll calls - Everyone answers happiness index - Review of Happiness index and standup emails |        | see imp board  |             |
| 4  | Sprint Planning        | 30   | PO        | - PO works through product backlog<br>- SD perform planning poker   |        |  |             |
| 5  | Get to know each other | 5    | Vukica    |   |        |  |             |
| 6  | Project Setup          | 5    | Tobi      | programming language and coding guidelines     tools     branching and merging  |        | issue is in progress                                 |             |
| 7  |                        |      |           |   |        |  |             |
| 8  |                        |      |           |   |        |  |             |
| 9  |                        |      |           |   |        |  |             |
| 10 | Open Points            | 5    | Everybody |   |        |  |             |
|    |                        | 95   |           |   |        |  |             |

9

Team Meeting Agenda 2023\_04\_24\_QAware

# Team Meeting Agenda "AMOS QAchat"

45

| ID | Topic                      | Time | Author | Description  | Result  | Decision | Responsible |
|----|----------------------------|------|--------|--|---|----------|-------------|
| 1  | getting to know each other | 5    |        | introduce new team members   |   |          |             |
| 2  | organization               | 20   |        | - access to Slack<br>- access to Confluence<br>- access to GDrive / Google Cloud | NDA is a problem, work in progress  |          |             |
| 3  | project topics             | 20   |        | talk about new advances in LLMs and project requirements                         | - documents mostly in german<br>- chatbot has no specific language<br>requirement |          |             |
| 4  |                            |      |        |  |   |          |             |
| 5  |                            |      |        |  |   |          |             |
| 6  |                            |      |        |  |   |          |             |
| 7  |                            |      |        |  |   |          |             |
| 8  |                            |      |        |  |   |          |             |
| 9  |                            |      |        |  |   |          |             |
| 10 |                            |      |        |  |   |          |             |

### Team Meeting Agenda "AMOS QAchat"

ID Topic Time Author Description Result Decision Responsible shared folder with planning documents Github Repo 5 Deliverables 1 Ensure that everybody has access - Happiness index tool 2 initialize planning documents 10 Deliverables insert base data, agree on role assignments 3 Agree on team contract 10 Deliverables submit as part of planning documents What are your first impressions from yesterday? (good, bad, suggestions, concerns, ...)
What documents / workspaces do we have (from Sebastian and Prof. Discussion about first project 4 impressions 10 Tobi Riehle)? What experiences do you have (regarding topics that might be needed in this project) ? How do you work (Timeslot, Tools, ...) ? 5 Getting to know each other 10 Tobi 6 Slack 10 Tobi Do we want to create our own Slack channel? 7 Homework 30 Tobi Go through Homework 1 tasks 8 Fill in happiness index 5 Deliverables counts as sprint 0, closes at midnight 9 10

Team Meeting Agenda 2023\_04\_18\_QAware

### Team Meeting Agenda "AMOS QAchat"

ID Topic Time Author Description Result Decision Responsible 1 getting to know each other 10 short introduction of each person go through project definition from Sebastian - look at methods Sebastian already Sebastian provides us the presented 2 project introduction 40 collected in progress, discuss results in next meeting, Sebastian will invite us to the Google discuss access to Slack, Confluence, Cloud 3 organization 20 GDrive and processing resources 5 6 7 8 10 70

Team Meeting Agenda Template

# Team Meeting Agenda "AMOS QAchat"

Date: tbd

| ID | Topic                | Time | Author    | Description   | Result | Decision | Responsible |
|----|----------------------|------|-----------|---|--------|----------|-------------|
| 1  | Sprint Review        | 30   | PO        | - Release Manager creates release candidate build - PO walks through "awaiting review" tickets, probing SDs                             |        |          |             |
| 2  | Sprint Release       | 5    | PO        | - PO decides release<br>- Release Manager creates release   |        |          |             |
| 3  | Sprint Retrospective | 15   | SM        | - SM reviews the impediments - SM performs roll calls - Everyone answers happiness index - Review of Happiness index and standup emails |        |          |             |
| 4  | Sprint Planning      | 30   | PO        | - PO works through product backlog - SD perform planning poker  |        |          |             |
| 5  |                      |      |           |   |        |          |             |
| 6  |                      |      |           |   |        |          |             |
| 7  |                      |      |           |   |        |          |             |
| 8  |                      |      |           |   |        |          |             |
| 9  |                      |      |           |   |        |          |             |
| 10 | Open Points          | 10   | Everybody |   |        |          |             |
|    | ,                    | 90   |           |   | •      |          |             |

Checklists Sprint-Tasks

| Role            | Tasks  |
|-----------------|--|
| Everyone        | participate in lecture                         |
|                 | participate in team meeting                    |
|                 | write 2 stand up emails                        |
|                 |  |
|                 |  |
|                 |  |
|                 |  |
| PO              | update feature board                           |
|                 | update planning documents                      |
|                 |  |
|                 |  |
| SD              | work on issues                                 |
|                 | update bill of materials                       |
|                 |  |
|                 |  |
| SM              | update impediments backlog                     |
|                 |  |
|                 |  |
|                 |  |
| Release Manager | ensure that sprint release candidate is tagged |
|                 |  |
|                 |  |
|                 |  |

Checklists Pre-Team-Meeting

| Role            | Tasks                                 |
|-----------------|---------------------------------------|
| PO              | create feature board screenshot       |
|                 | create planning document PDF          |
|                 |                                       |
|                 |                                       |
| SD              | push current work                     |
|                 | update assigned issues                |
|                 |                                       |
|                 |                                       |
| SM              | create impediments backlog screenshot |
|                 |                                       |
|                 |                                       |
|                 |                                       |
| Release Manager | tag sprint release candidate          |
|                 |                                       |
|                 |                                       |
|                 |                                       |

Checklists Team-Meeting (POs)

| Meeting Preparation  | ensure product backlog is ready coordinate with Release Manager   |                 |
|----------------------|---|-----------------|
| Sprint Review        |   |                 |
|                      | ask Release Manager to build release candidate  |                 |
|                      | walk through "Awaiting review" issues   |                 |
|                      | - ask SD to demo item under review  |                 |
|                      | - chech fulfillment of acceptance and DoD criteria  | Product Owner 1 |
|                      | - move item to feature archive (add label "Real Size = Y") or move issue to product backlog   |                 |
| Sprint Release       | decide whether release candidate should be released coordinate with Release Manager   |                 |
| Sprint Retrospective |   |                 |
|                      | SM TODOs<br>answer Happiness Index  | Scrum Master    |
| Sprint Planning      |   |                 |
|                      | reprioritize product backlog items start by most important backlog item and ask SDs to estimate the story points, do until SDs have enough work story points = {0, 1, 2, 3, 5, 8, 13} | Product Owner 2 |

Checklists Team-Meeting (POs)

| Meeting After-work |                           |
|--------------------|---------------------------|
|                    | update planning documents |
|                    | update feature board      |
|                    |                           |

Checklists Issue-Creation

### Steps to create a Github Issue:

1. Go here: <u>Issues · amosproj/amos2023ss03-qachat (github.com)</u>

2. click "New issue"

3. select corret template

4. write a title and description that follow the INVEST criteria

5. select the correct project

6. select the correct milestone (optional)

7. add correct labels

8. add Assignees (optional)

9. click "Submit new issue"

10. go here:

11. move issue to Product Backlog

12. open issue and set corresponding priority

Independent, Negotiable, Valuable, Estimatable, Small, Testable

"amos2023ss03-feature-board"

"sprint-{XY}"

"Est. size = X" and issue type

amos2023ss03-feature-board (github.com)