Albert Ratschinski (5154309)
Severin Plewe (5333060)

Exercise Sheet Nr. 2

(Deadline Wednesday, 01-05-2024, 15:59)

Task	1.1	1.2	1.3	1.4	2.1	2.2	2.3
Completed	☒	☒	☐	☒	☒	☒	☒
Feedback	☒	☒	☐	☐	☐	☐	☐

Exercise 1 – Process Model Application

1.1)

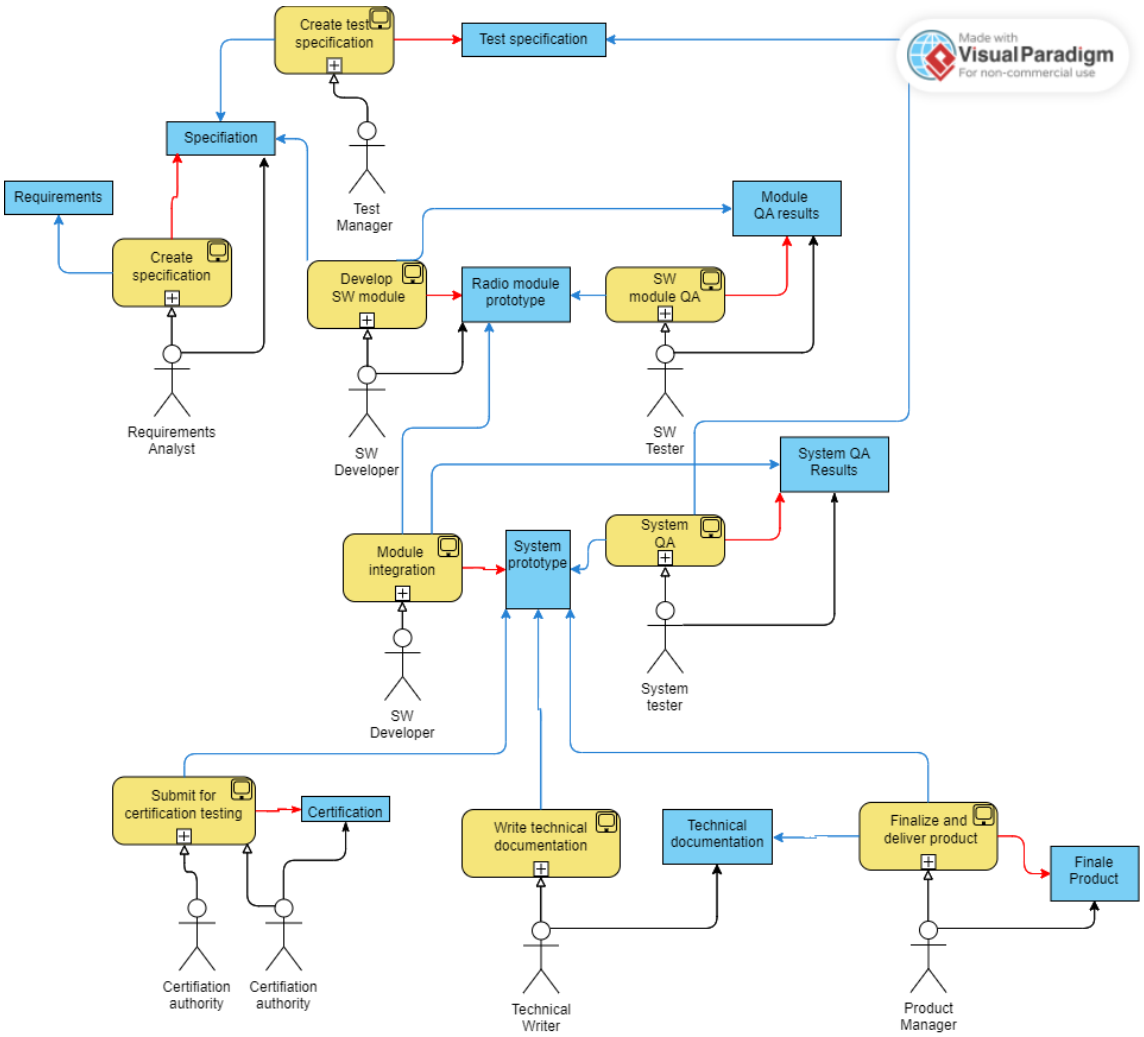
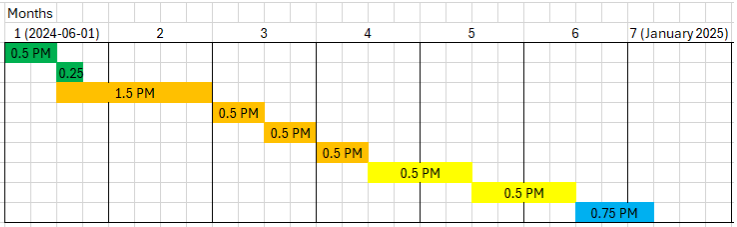


Abbildung 1: process model

1.2)

ID	Task Name	Time needed in PM	Weeks to complete
1	Create Specification	0.5	2
2	Create Test Specification	0.25	1
3	Develop SW module	1.5	6
4	SW module QA	0.5	2
5	Module Integration	0.5	2
6	System QA	0.5	2
7	Submit for certification testing	0.5	4
8	Write technical documentation	0.5	4
9	Finalize and deliver product	0.75	3



Alex (1 PM)	Requirements analyst, Test manager
Mia (1 PM)	Product manager
Chris (0.5 PM)	Certification manager, Technical writer
Robin (1 PM)	Software developer, Software tester, System tester

Abbildung 2:

1.3)

1.4)

a)

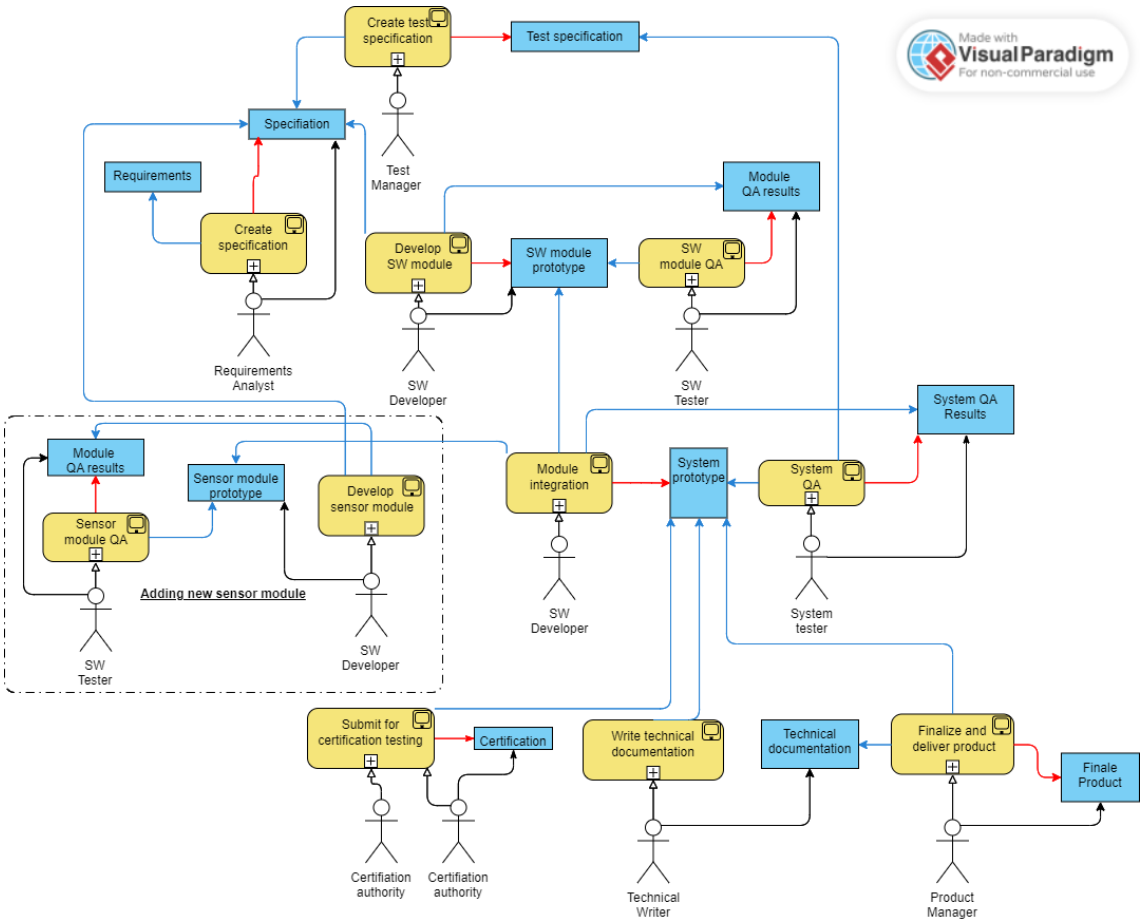


Abbildung 3:

b)

ID	Task Name	Time needed in PM	Weeks to complete
1	Create Specification	0.5	2
2	Create Test Specification	0.25	1
3	Develop SW module	1.5	6
4	Develop sensor module	1.5	9
5	SW module QA	0.5	2
6	Sensor module QA	0.5	2
7	Module Integration	0.5	2
8	System QA	0.5	2
9	Submit for certification testing	0.5	4
10	Write technical documentation	0.5	4
11	Finalize and deliver product	0.75	3

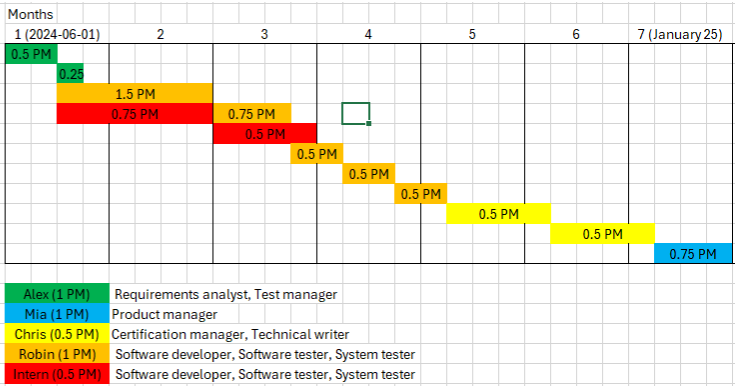


Abbildung 4:

Exercise 2 – Creating Process Models

2.1)

1. **Roles:**
   - **Student:** Engages in problem-solving, coding, and documentation.
   - **Tutor:** Reviews and tests the solution for accuracy and quality.
2. **Artifacts:**
   - **Exercise Sheet:** The document containing the tasks and requirements issued by the instructor.
   - **Solution Document:** The completed responses and code solutions to the exercises.
   - **Submission** The method used to submit the final solution document to the instructor.
3. **Activities:**
   a) **Receive Exercise Sheet:**
      - **Role:** Student
      - **Description:** The exercise sheet is distributed to the team by the instructor. The team reviews the requirements together in the initial meeting.

   b) **Break Down Tasks:**
      - **Role:** Students
      - **Description:** The team leader divides the exercises into manageable tasks and assigns them to team members based on their strengths and learning goals.

   c) **Research and Develop Solutions:**
      - **Role:** Student

- **Description:** Each team member works on their assigned tasks. This includes researching the problem, writing code, and initial testing.

d) **Internal Review and Testing:**

- **Role:** Students
- **Description:** Solutions are peer-reviewed within the team.

e) **Compile Final Solution Document:**

- **Role:** Students
- **Description:** All individual solutions are compiled into a single solution document. The document is formatted according to the course guidelines.

f) **Final Review:**

- **Role:** Students
- **Description:** The final document is reviewed for consistency, completeness, and adherence to the exercise requirements. Final adjustments are made.

g) **Submit Solution:**

- **Role:** Students
- **Description:** The team leader submits the completed solution document via the designated submission method (email, online platform, etc.).

h) **Feedback and Reflection:**

- **Role:** Students
- **Description:** After submission, the team gathers to discuss feedback once received from the instructor. They reflect on the process and identify areas for improvement for future tasks.

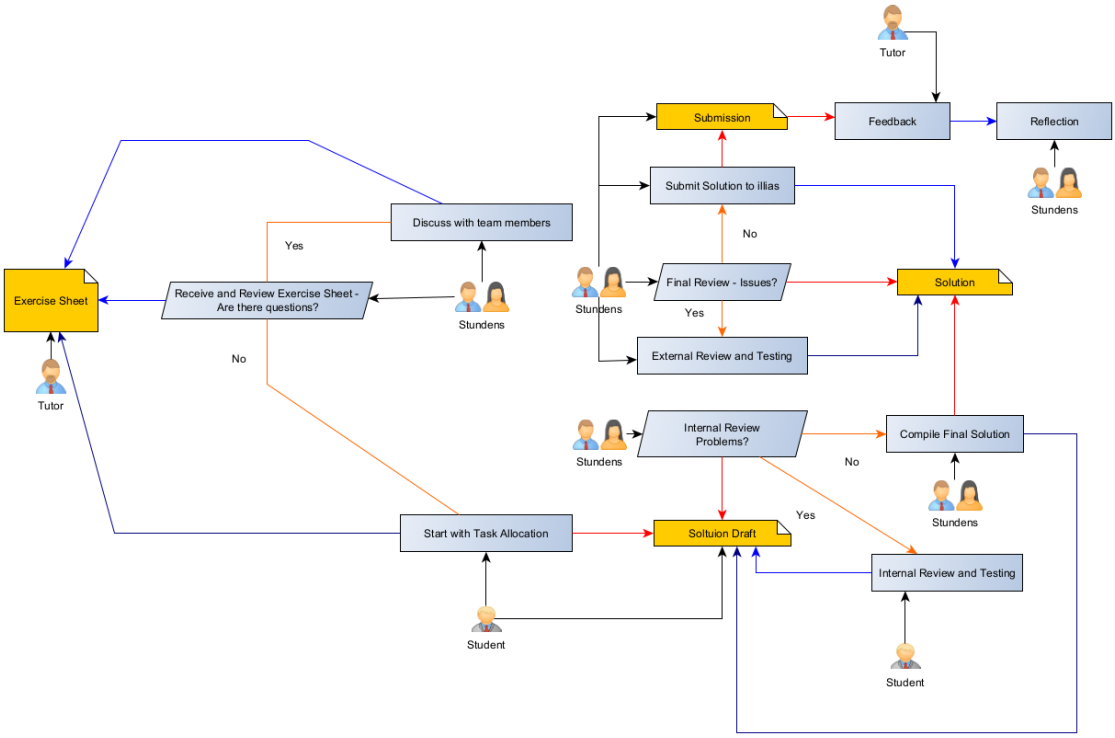


Abbildung 5: process model - exercise submission

1.2)

Advantages

1. **Clear Task Distribution:** Each team member is assigned specific tasks based on their strengths and learning goals, allowing everyone to contribute actively and improve problem-solving skills within a given domain.

2. **Collaboration and Peer Review:** The internal review process promotes collaboration and knowledge sharing, helping team members understand different coding styles and receive constructive feedback.

3. **Comprehensive Process:** Each member contributes to the collective solution while being exposed to the challenges others face during feedback sessions, enhancing their understanding.

Disadvantages

1. **Task Specialization:** Assigning specialized tasks may cause team members to focus too narrowly and miss opportunities to learn other skills.

2. **Imbalanced Workload:** Some exercises may require more effort than others, leading to an unbalanced workload that limits exposure to a wide range of learning opportunities.

1.3)

To ensure full team agreement on solution completeness and the selection of exercises for feedback, we propose extending our initial process model with the following steps:

1. **Consensus Meeting:**
   - **Role:** All Team Members
   - **Description:** Conduct a meeting after internal reviews to achieve consensus on the completeness and correctness of each solution. This step ensures that all team members agree on what is considered complete.
2. **Selection of Exercises for Feedback:**
   - **Role:** All Team Members
   - **Description:** Decide collectively which exercises to submit for detailed instructor feedback, focusing on areas of uncertainty or particular interest.
3. **Final Approval Before Submission:**
   - **Role:** All Team Members
   - **Description:** Before the final submission, hold a session where each team member must give their explicit approval of the final document, confirming their satisfaction with the representation of the team's collective work.