

## **Notes on Essence Cards**

- **Green Essence Cards: Stakeholders 1st Card: Recognized**

- Point 1: For our project the stakeholders are the clients, developers, end users, testers and documentation team which are all members of our group.
- Point 2: As our group members are the stakeholders, all stakeholder groups are represented in the team.
- Point 3: We have laid out and defined all the responsibilities involved in this project such as learning how a compiler works, documentation, coding and testing.

- **Green Essence Cards: Stakeholders 2nd Card: Represented**

- Point 1: The project was split into components and members were assigned to each component as per each person's agreement, so the responsibilities have been agreed.
- Point 2: Representatives have been authorized as the roles that team members are playing in the team have been decided.
- Point 3: We have agreed on an agile SDLC, learning separately while keeping deadlines in

mind and we have agreed to have regular meetings.

- Point 4: Our current way of working is supported by all members of the team.

- **Green Essence Cards: Stakeholders 3rd Card: Involved**

- Point 1: Since all representatives are on the team, they are assisting the team.
- Point 2: Timely feedback and decision making were achieved through various means of communication.
- Point 3: Various methods were used to communicate changes made to plans as quickly as possible.

- **Green Essence Cards: Stakeholders 4th Card: In Agreement**

- Point 1: The minimum expectations of the project are agreed upon.
- Point 2: The representatives are happy with their involvement.
- Point 3: The input and opinions of the representatives are carefully considered.
- Point 4: All team members' inputs are properly considered.
- Point 5: All members have similar perspectives and the priorities in the project are clear.

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- **Green Essence Cards: Stakeholders 5th Card: Satisfied for Deployment**

We now move on to the next set of green essence cards, Opportunity.

- **Green Essence Cards: Opportunity 1st Card: Identified**

- Point 1: We understand that this project is an opportunity to learn valuable skills and have therefore identified the idea behind the opportunity.
- Point 2: This point is not relevant as there are no investing stakeholders.
- Point 3: The stakeholders are the team members and thus all stakeholders have been identified.

- **Green Essence Cards: Opportunity 2nd Card: Solution Needed**

- Point 1: We have identified what we are building (a compiler) thus the solution has been identified.
- Point 2: The requirements from the project have been identified by the team and therefore the stakeholders needs have been established.

- Point 3: The team has understood the problem statement of the project and thus the problem has been identified.
- Point 4: The project has to be completed so the need for the solution is confirmed.
- Point 5: Many potential ideas were proposed.

- **Green Essence Cards: Opportunity 3rd Card: Value established**

- Point 1: This project is an opportunity to learn many valuable skills, thus the opportunity value has been quantified.
- Point 2: This point is not relevant as we are not releasing a product and thus can't understand its impact.
- Point 3: We have now understood the value of the system.
- Point 4: The success criteria for the project is clear and it is to complete building a compiler for c++ code.
- Point 5: The expected outcomes of this project have been clearly laid out and quantified.

- **Green Essence Cards: Opportunity 4th Card: Viable**

- Point 1: The project has been outlined.
- Point 2: The project is possible with the given team size and within the allotted time.
- Point 3: The risks of the project are low and manageable.
- Point 4: This is not relevant to the project as its

not a product that is to be deployed on the market.

- Point 5: The reason for developing this project is to get hands-on learning experience about the things that are relevant in the industry today.
- Point 6: Pursuing this project is viable.

- **Green Essence Cards: Opportunity 5th Card: Addressed**

- Point 1: The project's learning opportunities have been addressed.
- Point 2: This is not relevant as the project is not being deployed.
- Point 3: The stakeholders, team members in this case are satisfied with the project.

- **Green Essence Cards: Opportunity 6th Card: Benefit Accrued**

- Point 1: The learning benefits of this project have accrued.
- Point 2: The return on the time investment is acceptable.

We now move on to the next colour of essence cards, Yellow.

- **Yellow Essence Cards: Software System 1st Card: Architecture selected**

- Point 1: We haven't marked this point yet as we have not agreed on the architecture selection criteria.
- Point 2: We will be developing software for Desktop PCs and Laptops only, thus we have identified hardware platforms.
- Point 3: We will be using algorithms for the code compiling process and we will be implementing these algorithms, no additional tools will be used directly in the project, therefore we have selected the technologies we will use.
- Point 4: We are building a compiler to compile c++ code only, therefore the system boundary is known.
- Point 5: Decisions on system organization have been made.
- Point 6: Buy, build, reuse decisions regarding the modules have been made.
- Point 7: The technical risks of the project have been understood and agreed to.

● **Yellow Essence Cards: Software System 2nd Card: Demonstrable**

- Point 1: The key architectural characteristics of the project have been demonstrated.
- Point 2: System's performance has been measured through various tests.
- Point 3: This is not relevant as our project does not require hardware configurations.
- Point 4: The critical interfaces of the project have been shown to work properly.

- Point 5: Integration with the environment has been demonstrated.
- Point 6: The Architecture has been accepted as fit-for-purpose.
- **Yellow Essence Cards: Software System 3rd Card: Usable**
  - Point 1: The system can be operated.
  - Point 2: The functionality of the system has been tested.
  - Point 3: The performance of the system is acceptable.
  - Point 4: The defect levels in the system are acceptable.
  - Point 5: The system has been fully documented.
  - Point 6: The final content of the system is clear.
  - Point 7: The value added by the system is clear.
- **Yellow Essence Cards: Software System 3rd Card: Ready**
  - Point 1: This point has not been marked yet as user documentation is not available.
  - Point 2: The system has been accepted as fit-for-purpose.
  - Point 3: The stakeholders want this system.
  - Point 4: This point is not relevant as the system is not being launched.

Since we have not marked every point on this card, we stop here for the Software System yellow cards, we now move on to the next set of yellow essence cards, Requirements.

- **Yellow Essence Cards: Requirements 1st Card: Conceived**

- Point 1: Stakeholders agreed to the system that is needed to be produced.
- Point 2: Users are identified, for the students that mostly needed a smart compiler.
- Point 3: This point is not relevant as we do not have funding.
- Point 4: The opportunities are clear for our project, as having a smart compiler is a need and learning opportunity for the student.

- **Yellow Essence Cards: Requirements 2nd Card: Bounded**

- Point 1: The development stakeholders are the team members and thus they have been identified.
- Point 2: We have agreed that the purpose of the software is to compile c++ code.
- Point 3: The success criteria for the system is clear and it's the system's ability to correctly compile c++ code.
- Point 4: The team members understand the solution (the compiler) on a basic level, therefore shared solution understanding exists.



- Point 5: The SRS has been made and therefore the requirement's format is agreed upon.
- Point 6: Though the requirements are now mostly fixed, a mechanism for handling changes in them is set up.
- Point 7: Which requirements to prioritize are clear and therefore the prioritization scheme is clear.
- Point 8: Constraints like time have been identified and considered.
- Point 9: The assumptions made by us about the project are clear.

- **Yellow Essence Cards: Requirements 3rd Card: Coherent**

- Point 1: The requirements of the system have been shared among the team members.
- Point 2: The origins/reasons for the requirements are clear.
- Point 3: The rationale behind the project is clear.
- Point 4: The conflicts regarding the requirements have been resolved.
- Point 5: Essential characteristics of the system are clear.
- Point 6: Key usage scenarios of the system are understood.
- Point 7: The implementation priorities of the system are clear.

- Point 8: The system's impact is understood
- Point 9: The team has an understanding of the project and knows and agrees on what to deliver.

- **Yellow Essence Cards: Requirements 4th Card: Acceptable**

- Point 1: The acceptable version of the system has been described.
- Point 2: The changing of requirements is in control.
- Point 3: The value to be realized by the system is clear.
- Point 4: It is clear how the opportunity is to be addressed.
- Point 5: The system and requirements are testable.

- **Yellow Essence Cards: Requirements 5th Card: Addressed**

- Point 1: Enough of the requirements were addressed to be acceptable.
- Point 2: The requirements and system match.
- Point 3: The value realized by the system is clear.
- Point 4: The system is worth making operational.

- **Yellow Essence Cards: Requirements 6th Card: Fulfilled**

- Point 1: The stakeholders have accepted the requirements.
- Point 2: There are no hindering requirements.
- Point 3: The requirements have been fully satisfied.

We now move on to the next colour of essence cards, Blue.

- **Blue Essence Cards: Work 1st Card: Initiated**

- Point 1: The required result of the project is a functioning compiler that can compile c++ code, therefore the required result is clear.
- Point 2: The constraint for this project is time until project submission, so the constraints are clear.
- Point 3: This point is not relevant as there is no funding.
- Point 4: The initiator of this project is our group leader, therefore the initiator has been identified.
- Point 5: Since accepting stakeholders are the ones that must accept the outcome of the project, all team members and the professor are accepting stakeholders, thus they have been identified.
- Point 6: This point is not relevant as there is no funding.
- Point 7: Priorities for this project are first learning and then building, as such the priorities are clear.

- **Blue Essence Cards: Work 2nd Card: Prepared**

- Point 1: The commitment to work on this project has been made as this has been decided as our final choice for the project.
- Point 2: We have estimated that it will take around 1 month of medium team effort and we estimate that there will be low to zero cost.
- Point 3: We have researched about compilers and have found learning resources, we also understand the availability of time.
- Point 4: The risk exposure of the project has been understood.
- Point 5: We have established the acceptance criteria of a working compiler that can compile c++ code.
- Point 6: The system has been sufficiently broken down into components.
- Point 7: The tasks have been identified and prioritized.
- Point 8: A credible plan that has been agreed upon is in place.
- Point 9: This point is not relevant as there is no funding.
- Point 10: All team members are ready to work on the project.
- Point 11: The Integration points have been defined.

- **Blue Essence Cards: Work 3rd Card: Started**

- Point 1: The development has been started.

- Point 2: The development progress is being monitored.
- Point 3: The definition of done, the point at which the project is finished, is in place.
- Point 4: Tasks are being progressed.

- **Blue Essence Cards: Work 4th Card: Under Control**

- Point 1: Tasks are being completed.
- Point 2: Possibility of unplanned work is under control.
- Point 3: The identified risks are under control.
- Point 4: Estimates of time taken were revised to reflect team performance.
- Point 5: The progress of the project is being measured.
- Point 6: Re-work on the modules is in control.
- Point 7: The commitments are being fulfilled consistently.

- **Blue Essence Cards: Work 5th Card: Concluded**

- Point 1: Only administrative tasks are left and development is complete.
- Point 2: Results have been achieved.
- Point 3: The final system has been accepted.

- **Blue Essence Cards: Work 6th Card: Closed**

- Point 1: Several helpful lessons have been learned from this project.
- Point 2: This point hasn't been marked
- Point 3: All goals that were laid out have been achieved.
- Point 4: This point is not relevant as there is no budget.

- Point 5: This point hasn't been marked.
- Point 6: This point hasn't been marked.

We now move on to the next set of blue cards, Way of Working.

- **Blue Essence Cards: Way of Working 1st Card: Principles Established**

- Point 1: We as a team actively support the principles of working together, actively contribute and manage the workload.
- Point 2: The stakeholders have agreed on the principles.
- Point 3: The tools that are needed for our system have been agreed among the team.
- Point 4: Any approach is recommended among the group members if it aligns with our goals.
- Point 5: We have understood all the operations that will be needed for the completion of this project.
- Point 6: The practice and tool constraints is known by the team members, upto what extent the tool we can use for the particular tasks.

- **Blue Essence Cards: Way of Working 2nd Card: Foundation Established**

- Point 1: Key practices and tools are selected.
- Point 2: Practices needed to start work have been agreed on.

- Point 3: Non-negotiable practices and tools have been identified.
- Point 4: Gaps between available and needed way of working understood.
- Point 5: Gaps in capability have been understood.
- Point 6: An integrated way of working is available.

- **Blue Essence Cards: Way of Working 3rd Card: In Use**

- Point 1: Practices and tools are in use.
- Point 2: The project is regularly inspected.
- Point 3: The use of tools and practices has been adapted to the context of the project.
- Point 4: The use of the tools and practices are supported by the team.
- Point 5: Mechanisms for considering feedback are in place.
- Point 6: The practices and tools use support collaboration.

- **Blue Essence Cards: Way of Working 4th Card: In Place**

- Point 1: The tools and practices are being used by the whole team.
- Point 2: The tools and practices are accessible to the whole team.
- Point 3: The tools and practices have been inspected and adapted by the team.



- **Blue Essence Cards: Way of Working 5th Card: Working Well**

- Point 1: Progress is being made in a predictable manner.
- Point 2: Practices are being naturally applied.
- Point 3: The tools naturally support way-of-working.
- Point 4: This point hasn't been marked.

Since we did not mark all points on this card, we stop here for the way of Working blue cards, now we move on to the next set of blue cards, Team.

- **Blue Essence Cards: Team 1st Card: Seeded**

- Point 1: The goal of the team is to complete the project, as all the requirements of the project have been defined, the mission has been defined.
- Point 2: The Constraint of time is known and defined.
- Point 3: This point is not relevant for the project as we are not releasing a product and the team size cannot change.
- Point 4: The composition of the team according to the given roles has been defined.
- Point 5: The responsibilities that need to be fulfilled have been outlined.
- Point 6: The required commitment level from all members is clear.
- Point 7: We have identified the required skills and competencies to finish this project.
- Point 8: The size is determined to be 6 members.
- Point 9: This point is not relevant for a small group like ours.

- Point 10: A leadership model is not necessary for such a small group, therefore the point is not relevant.

- **Blue Essence Cards: Team 2nd Card: Formed**

- Point 1: The group size is the maximum allowed, therefore enough members have been recruited.
- Point 2: The members have all understood the roles assigned to them.
- Point 3: How to work has been understood.
- Point 4: All members have been introduced to all other members of the team.
- Point 5: Individual responsibilities have been agreed on and match member competencies.
- Point 6: Members have accepted their tasks.
- Point 7: The external collaborators have been identified.
- Point 8: Communication mechanisms have been defined.
- Point 9: The teams are fixed and the members have committed to the team.

- **Blue Essence Cards: Team 3rd Card: Collaborating**

- Point 1: This point hasn't been marked.
- Point 2: Communication is open and honest.
- Point 3: The team is focused on the mission.
- Point 4: All members know each other.

Since we have not marked every point on this card, we stop here for the Team blue cards, and that is the end of our essence cards.