Theory

1. **Introduction**
   * On this chapter the basics, that will be explained more on the detail on the next chapters are mentioned briefly. It starts by mentioning the purpose of the book, which is “to supplement the PMBOK® Guide with knowledge and practices that can improve the efficiency and effectiveness of software project managers, their management teams, and their project members.” Then it explains what a project is, continuing with what project management is and why it is so challenging. On the 4th and 5th subchapters the authors describe relationships between different PM entities. On the 4th is described the one between projects, programs, and portfolios, meanwhile on the 5th the one among project management, operations management, and organizational strategy. The subchapter 1.6 introduces the concept of “Business Value”, and the 1.7 explains the role of a project manager. The 8th subchapter explains what this book, namely PMBOK is and is not. Quality management is mentioned briefly on 1.9 as it will be gone more on detail on a whole chapter, the 8th one. The same is done on the 1.10 with “Project Life Cycles and Agile Methods” as they also have a designated chapter, namely the second one. The last subchapter of the first chapter explains software extension processes, i.e. inputs, tools and techniques, and outputs for each project management process.
2. **Project Life Cycle and Organization**
   * The second chapter analyzes how an organization and its structure influences a project and also the tools and techniques that are used for it. The first subchapter describes the organizational influences on project management and the information provided is divided in five further sections: Organizational Cultures and Styles, Organizational Communications, Organizational Structures, Organizational Process Assets and the last one is the section named “Enterprise Environmental Factors”. The second chapter gives concisely information about project stakeholders and governance. Even though, the matter is described shortly, its essence is explained certainly well. The third subchapter is called “Project Team”, and like the name suggests, it introduces the team entity of a project and all the different structures that it can take dependently on its members. While the first two subchapters provided information about the organization, the last one introduces the project life cycles as a concept. On its two sections it goes more into detail about its characteristics and phases respectively.
3. **Project Management Processes for a Project**
   * On this third chapter each of the five project management process groups (Initiating, Planning, Executing, Monitoring and Controlling, and Closing) has its designated subchapter where it is explained how they are incorporated into the management of software projects. The starting subchapter makes the distinction between process groups vs project phases and also the coexistence and interaction between the process groups mentioned above, hence the chapter name “Common Project Management Process Interactions”. The second one describes all the process groups graphically together, while also simultaneously describing the dependencies between them. The first process group, namely “Initiating Process Group”, starts the series of subchapters that go in detail about each one of them with 3.3. The other ones, i.e. Planning, Executing, Monitoring and Controlling, and Closing are explained relatively more in detail on subchapters 4,5,6,7 respectively. The subchapter “Project Information” describes the three types it is divided into, i.e. work performance data, work performance information, and work performance reports. The 47 identified project management processes from PMBOK(the original book, not this one: software edition) are mapped into 10 categories. Each one of them has its own chapter starting from the next one, namely chapter 4. They describe the inputs, tools and techniques, and outputs for most software projects.
4. **Project Integration Management**
   * The chapter is started by providing the definition of PIM on the PMBOK book. It is defined as the knowledge area that “processes and activities needed to identify, define, combine, unify, and coordinate the various processes and project management activities within the Project Management Process Groups”. To differentiate it, it doesn’t mean how software components are integrated in a system, but the integration of processes and activities on a project. The first step of Integration Management and hence the name of the first subchapter is “Develop Project Charter”. It allows the management entity to allocate enterprise resources to the (software) project. The second subchapter is “Develop Project Management Plan” where the whole project is divided on subprojects, for each of those is developed a plan with all inputs, outputs, tools and techniques , and lastly all of these plans are pieced together into a master plan. The following four chapters, simultaneously steps of PIM are: “Direct and Manage Project Work, Monitor and Control Project Work, Perform Integrated Change Control and Close Project or Phase”. For each of these sections the inputs, outputs, tools and techniques are to be written.
5. **Project Scope Management**
6. **Project Time Management**
7. **Project Cost Management**
8. **Project Quality Management**
9. **Project Human Resource Management**
10. **Project Communications Management**
11. **Project Risk Management**
12. **Project Procurement Management**
13. **Project Stakeholder Management**