

SEN-201 – Software Engineering Process
00100 – Explain the difference between a software engineering approach to development and an ad hoc approach

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In the technology world, there are a wide variety of ways in working with software development. In the professional realm, most industries employ the mainstream “Software Engineering Approach” to development over an ad hoc approach. Even though, these two approaches have several fundamental difference, both of them can still be applied to various software development scenarios as real-world scenarios may not always strictly follow along with the aforementioned approaches to software development.

In a professional environment, most technological industries or companies employ the “Software Engineering Approach”, in which, they lay out a planned or systematic process when it comes to developing their software. A person who follows these principles are called “Software Engineers”, in which, they follow the four main ideas i.e. implementing design decisions, working within a team, writing comprehensible code, and following procedures of the team. These four main ideas or “properties” are only some that make up the majority of software engineers all around the world. In our project, ScheDool, we incorporated several of these elements in the development of our project. As described in the SEN-201:00090, we went through the different stages in development i.e. problem statement definition, design phases (flowcharts and architectural diagrams), implementation phase, validation phase and the deployment phase. Dividing the project system into multiple phases along with planning actions and processes in each of these phases is essentially applying a systematic approach to our development process.

On the other hand, there also exists a completely different approach to software engineering in which flips the concept on its head, that is, an “ad hoc approach” to software development. “Ad hoc”, a Latin phrase, meaning literally “for this”. In a general context, this would mean “a solution designed for a specific purpose, problem, or task rather than a generalized solution adaptable collateral instances” – Wikipedia. In the context of software development, it is said to be “writing code in an unplanned way and for a particular purpose only” – Baeldung. This is the polar opposite of the aforementioned systematic approach, in which, we would need to plan out the steps before going ahead with the implementation phase. In ScheDool, we also include this into some (a lot) of our processes, this can be seen more clearly in the final moments of the deployment process, we made a quick decision to switch away from React Native to Flutter. There are many other notable instances of us using an quick ad hoc approach for our implementation process.

In summary, even though these two different approaches to software engineering have a fundamental difference, in a real-world scenario, it is extremely likely (and possible inevitable) that these two pathways will merge or be included in each other, in one way or another. As demonstrated in our ScheDool project, it is certain that we will eventually come to a position where we may not have planned a way to handle certain scenarios which leads us to improvise our development process.