Introduction

We will understand what a project life cycle is. Human being has a life cycle, which includes pregnancy, childhood, adolescence, maturity, and old age. Similarly, a project has life which defines a series of phases that the project moves from beginning to end, till the objectives are achieved. It is a structure to manage a project and applied in all types of work concerning any discipline. Project life cycles can be predictive, iterative, incremental, and agile, including phases, which are called development life cycle.

Phase

A phase is a compilation of activities, which are logically related and culminate in accomplishment of deliverables. Phases may be sequential, iterative, overlapping, and this decision will be taken considering the nature and size of the project, control requirements of the organization, and the application area. Phases are time-bound, with defined start and end. Phases include control points, which are also called control gate, phase gate, and phase review. At the control point, assessment is carried out regarding any change required in the project, terminated, or continued as planned by reassessing project charter and business documents based on existing circumstances. Also, project performance is compared with the project management plan to assess deviation, if any, and take necessary corrective actions.

Type of Project Life Cycles

Predictive life cycle (also called waterfall)

During the early stages, project scope, time, cost are established, and changes to scope are managed. Work is known and can be predicted since there is adequate industry base, or maybe numerous similar projects have been executed previously. Uncertainty is reduced, which permits the division of work into predictable segments. For example, a tower is required to be constructed. Numerous other towers have been built, and all details regarding the cost of material needed, time needed for construction, resources need are known. Thus, all the work can be predicted.

Iterative life cycle

Permits feedback on work, which has been partly finished or ongoing tasks, to improve or adjust
work. For example, a prototype of a car is developed and shared with sponsor or stakeholders to obtain feedback based on which model is refined. Till such time the desired results are achieved, the process is repeated.

**Incremental**

In incremental project life cycle, the finished deliverables are provided to the customer, so that these can be used immediately. Project scope is established during early stages, but estimates of time and cost are revised as the perception of product increases. Iterations create a product through cycles, while increments are added to the functionality of product functionality within the planned time frame. When the final iteration is finished, deliverables are considered complete. For example, the project is the construction of a web site that has nine features. The developer constructs only three elements, after which the customer can start using this web site with the partial features available. Value is being obtained without complete construction of the web site, which will be completed during the next phase. The work of the web site is being added incrementally to the project.

**Agile**

Agile project life cycles are both iterative and incremental in nature as these possess characteristics of both of these life cycles. Product is iterated to produce completed deliverables. Project teams obtain early feedback, and customer is provided confidence regarding their desired product. Since the project team is able to release earlier, the return on investment is available early. The project team offers work which has the highest value first.

**Hybrid**

Hybrid project life cycles have a combination of predictive and adaptive life cycles. Known elements of the project follow predictive, while elements that are in the evolution stage, and not known completely, follow an adaptive life cycle.

**Conclusion**
Different project life cycles are employed for the execution of projects. Each life cycle has a distinct characteristic, due to which each life cycle is suitable according to the type and need of the project. Traditionally, predictive project life cycle was used, but due to the advancement of technology, other life cycles have been introduced, which are more suitable due to changes need of the market and organizations. Expect three to four questions in the PMP exam regarding the project life cycles.