**How Abstract Factory Design Pattern Enhanced our Project?**

Main Key benefits of using Abstract Factory design pattern is it isolates concrete classes and helps to control the classes of objects that an event factory application creates. Event factory encapsulates the responsibility and the process of creating abstract factory and event class objects and it isolates user from implementation classes. Through this method we are able to produce many relevant event objects without specifying their concrete class such as EventName, StartDate etc.

We have applied the Abstract Factory pattern to creating the events. Class EventFactory can create components of Events. It builds Trekking & Camping, Photography, Midnight event from Event class. It might be used by a program that reads plans for Events from a file and builds the corresponding Trekking & Camping, Photography, Midnight events or it might be used by a program that builds Events randomly. Programs that build Events take a EventFactory as an argument so that the programmer can specify the classes of Trekking & Camping, Photography, Midnight events to construct. We can create Event, a factory for Event, by sub classing EventFactory. Event will override different member functions and return different subclasses of Trekking & Camping, Photography, Midnight event etc.