**Phase 1-> Planning**

The planning phase is the foundation of any successful software development project. It focuses on clearly defining the objectives, scope, and feasibility of the project, setting the stage for all subsequent phases. For this particular project, the objective is to develop **"SkyLens"**, an intuitive and visually engaging weather application tailored for everyday users seeking accurate, real-time weather information.

The core goal of SkyLens is to provide a comprehensive yet user-friendly platform that allows users to explore various weather-related data points, including current weather conditions, future forecasts, and atmospheric phenomena like moon phases. During the planning phase, the team identified key features that would differentiate the application from basic weather widgets. These include:

1. **Daily weather updates**: Real-time weather data for the user’s selected location.
2. **City-based search functionality**: A dynamic feature allowing users to look up weather in any city worldwide.
3. **Weather alerts**: Notifications about severe weather conditions, sourced via weather APIs.
4. **Moon phase data**: Visually appealing moon cycle tracking integrated with lunar information.
5. **10-day weather forecast**: Extended forecast capability to help users plan ahead.

To support these functionalities, the project planning also included defining the technology stack and resources. The application is built using **HTML, CSS, and JavaScript**, with API integrations from external services like OpenWeatherMap and WeatherAPI. These technologies were chosen for their compatibility, performance in web environments, and ease of deployment. The team also considered the feasibility of implementation within the available timeframe, ensuring that each feature could be developed and tested effectively.

At this stage, no actual code or files were created. Instead, the focus remained on aligning the vision of the project with practical limitations and opportunities. By mapping out the scope and requirements in detail, the planning phase ensures that all stakeholders—whether developers or designers—start from a shared understanding and direction. This minimizes confusion and helps in maintaining consistency throughout the development lifecycle.

In summary, the planning stage was crucial for outlining the vision and strategic path of SkyLens. It ensured the project's viability and laid the groundwork for a well-structured design and development process to follow.