**Lab #06 Engr.Zakria Bacha**

**Task Details**

**1. Create a Header File (time.h)**

* Define the Time class inside the header file.
* Include private data members for hour, minute, and second.
* Declare public member functions:
  + **Default constructor** to initialize time to 00:00:00.
  + **setTime(int h, int m, int s)** to set time with validation.
  + **printTime()** to display time in HH:MM:SS format.
  + **show()** to display time in 12-hour AM/PM format.

**2. Implement the Class in a Separate File (time.cpp)**

* Implement the functions declared in time.h.
* Ensure setTime() validates the values before setting them.
* Implement show() to display time in a 12-hour format with AM/PM.

**3. Write a Main Program (main.cpp)**

* Include the time.h header file.
* Create a Time object dynamically using pointers.
* Set and display the time using the available functions.
* Deallocate the memory before program termination.

**Class Implementation**:

* The Time class should be implemented with encapsulation and member functions.
* The hour, minute, and second should be validated before assignment.

**Header File Usage**:

* The Time class should be declared in a separate time.h file.
* The time.cpp file should contain the implementation of member functions.

**Dynamic Memory Allocation**:

* Use new to create a Time object dynamically.
* Use delete to free allocated memory.

**Display Formats**:

* Implement printTime() to show HH:MM:SS format.
* Implement show() to display time in a 12-hour AM/PM format