# How to Run the Time Tracker Application Using XAMPP

This guide provides step-by-step instructions to set up and run the **Time Tracker** application on your local machine using NetBeans IDE and XAMPP. The application is built using C++, HTML, CSS, JavaScript, PHP, and MySQL.

## Prerequisites

Before you begin, ensure you have the following software installed on your system:

1. **NetBeans IDE** with C++ and PHP support.
2. **XAMPP** (includes Apache, PHP, and MySQL).
3. A web browser (e.g., Chrome, Firefox).
4. **OpenOffice** (to open SQL files if needed).

## Note on Project Versions

* After completing **Step 1**, you can run all **versions 1 to 9\_1**, as this part of the code is written in **C++**. The C++ versions can be executed directly within NetBeans.
* **Versions 10 and above** are implemented in **PHP** and need to be run as web applications following the steps outlined below.

## Step 1: Install NetBeans IDE with C++ and PHP Support

If you haven't already installed NetBeans:

* Download NetBeans from the [official website](https://netbeans.apache.org/download/index.html).
* Choose the version that includes both **C++** and **PHP** support.
* Install NetBeans by following the on-screen instructions.
* **Note**: For detailed instructions on setting up NetBeans, please refer to the included **PDF** document in the project folder.

## Step 2: Install XAMPP

You need a local server environment to run PHP and MySQL:

* Download XAMPP from Apache Friends.
* Install XAMPP by following the installation wizard.
* After installation, open the **XAMPP Control Panel** and start the **Apache** and **MySQL** modules by clicking the **Start** buttons.

## Step 3: Configure PHP in NetBeans

1. Open **NetBeans IDE**.
2. Go to **Tools** > **Options**.
3. Select the **PHP** tab.
4. Ensure the correct PHP interpreter is set (e.g., C:\xampp\php\php.exe).
5. Click **OK** to save the settings.

## Step 4: Set Up the Project Directory

1. Navigate to your XAMPP installation directory: C:\xampp\htdocs.
2. Create a new folder named Time\_Tracker.

## Step 5: Clone or Download the Project from GitHub

1. **Clone the Repository**:
   * Open a command prompt.
   * Navigate to the htdocs directory:

bash

Copy code

cd C:\xampp\htdocs

* + Run the following command:

bash

Copy code

git clone https://github.com/yourusername/Time\_Tracker.git

* + Ensure the project files are inside the Time\_Tracker folder.

1. **Alternatively, Download as ZIP**:
   * Go to the GitHub repository page.
   * Click on **Code** > **Download ZIP**.
   * Extract the ZIP file contents into the Time\_Tracker folder in htdocs.

## Step 6: Create the MySQL Database

1. Open **phpMyAdmin**:
   * In your web browser, go to http://localhost/phpmyadmin/.
2. Create a new database:
   * Click on the **Databases** tab.
   * Under **Create database**, enter time\_tracker as the database name.
   * Choose utf8\_general\_ci as the collation.
   * Click **Create**.
3. Import the database schema:
   * The project includes SQL scripts in the SQL folder.
   * You can open the SQL files using **OpenOffice** (after installing it).
     + **Note**: OpenOffice can be downloaded from here.
   * Alternatively, you can view the SQL scripts directly in a text editor.
   * To import the SQL commands:
     + Click on the time\_tracker database you just created.
     + Go to the **SQL** tab in phpMyAdmin.
     + Copy and paste the SQL commands from the SQL files into the text area.
     + Click **Go** to execute the SQL commands.

## Step 7: Configure Database Connection in config.php

1. Open **NetBeans IDE**.
2. Go to **File** > **Open Project**.
3. Navigate to C:\xampp\htdocs\Time\_Tracker and select the project.
4. Open the config.php file located in the php directory.
5. Ensure the database connection parameters match your setup:

php

Copy code

<?php

$servername = "localhost";

$username = "root"; // Default XAMPP MySQL username

$password = ""; // Default XAMPP MySQL password is empty

$dbname = "time\_tracker";

$conn = new mysqli($servername, $username, $password, $dbname);

if ($conn->connect\_error) {

die("Connection failed: " . $conn->connect\_error);

}

?>

1. If you've set a password for the root user or are using a different user, update $username and $password accordingly.

## Step 8: Configure Project in NetBeans

1. Right-click on the project in the **Projects** pane and select **Properties**.
2. Under **Sources**:
   * Set the **Project Folder** to C:\xampp\htdocs\Time\_Tracker.
   * Ensure the **Web Root** is set to the same directory.
3. Under **Run Configuration**:
   * Set the **Run As** option to **Local Web Site (running on local web server)**.
   * Set the **Project URL** to http://localhost/Time\_Tracker/.
4. Click **OK** to save the settings.

## Step 9: Start Apache and MySQL Services

1. Open the **XAMPP Control Panel**.
2. Start the **Apache** and **MySQL** modules by clicking the **Start** buttons next to each.

## Step 10: Run the C++ Versions (1 to 9\_1)

After completing **Step 1**, you can run all C++ versions from **Version 1** to **Version 9\_1**:

1. Open **NetBeans IDE**.
2. Go to **File** > **Open Project**.
3. Navigate to the folder containing the C++ versions (e.g., Time\_Tracker\Version\_1).
4. Select the version you wish to run.
5. Build and run the project within NetBeans.

**Note**: Each version may have its own specific instructions or requirements. Please refer to the documentation included with each version for detailed information.

## Step 11: Run the Web Application (Versions 10 and Above)

**Versions 10 and above** are implemented in **PHP** and need to be run as web applications:

1. In **NetBeans**, right-click on the project and select **Run**.
2. Alternatively, open a web browser and navigate to http://localhost/Time\_Tracker/.
3. Ensure that you have followed **Steps 6 to 9** to set up the database and start the necessary services.

## Step 12: Use the Application

### Register a New User

1. On the homepage, you have options to **Login** or **Register**.
2. Click on **Register**.
3. Fill in the registration form:
   * **Username**: Must be 3-20 alphanumeric characters or underscores.
   * **Password**: Must be at least 5 characters.
   * **Role**: Select either **Student** or **Instructor**.
   * **Class**: Required if the role is **Student**.
4. Click **Register** to create a new account.

### Login

1. Return to the homepage.
2. Enter your **Username**, **Password**, and select your **Role**.
3. Click **Login**.

### For Students

* After logging in, you will be directed to user.html.
* You can:
  + **Start Timer**: Begin tracking your time.
  + **Stop Timer**: Stop tracking and save the session.
  + **Edit Account**: Update your username, password, or class.
  + **Logout**: End your session.

### For Instructors

* After logging in, you will be directed to admin.html.
* You can:
  + **Manage Users**: View, edit, or delete user accounts.
  + **Create Account**: Add new users directly.
  + **View Logs**: Access time logs of users.
  + **Logout**: End your session.