CIPHERBYTE TECHNOLOGIES

A guide to help you during your internship

CipherByte
TECHNOLOGIES

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INSTRUCTIONS

- LinkedIn profile improvement (mandatory).
- Placment support materials are provided to assist in your preparation.
- Maintain a separate GitHub repository name asCBCT all the tasks and share the link of the GitHub repo in the task submission form (it will be given later through email).
- PEER EVALUATION watch and comment on at least two task videos on linkedin posted by fellow interns.

SUBMISSION

- A TASK SUBMISSION FORM will be shared later. Till then please continue your task.

- A video need to be created to showcase your work, demo of your effort. The video should start with by your name on the first

- The video must be hosted on LinkedIn for proof of your work and build your credibility among your peers. You must tagCipherByte Technologies in such posts.

  Please add #cipherbytetechnologies in each of your task video posting on LinkedIn. Additionally you can also add hashtags depending on your internship domain for more reach and visibility

ABOUT THE INTERSHIP

COMPLETION CERTIFICATE

RECOMMENDATION LETTER

PLACEMENT SUPPORT

WEB DEVELOPMENT

TASK LIST

For Web Development internship you need to complete at least 2 task for successful completion of the internship

LANDING PAGE

A landing page is one of the best web development projects for beginners. This project demands a foundational understanding of HTML and CSS. You will learn how to add columns, divide sections, arrange items, add headers, footers. Most importantly, you will use your creativity to make the page look impressive. The alignments, the padding, the color palette, boxes and all the other elements on the page require attention. Use CSS carefully to make sure the elements on the page do not overlap.

PORTFOLIO

You can create a personal portfolio with the basic skills in CSS and HTML. This is yet again, one of the most common projects on web development for beginners. In a personal portfolio, you get to show a wide range of samples and skills and add your resume. You can add an image at the top where you can introduce yourself, below that, you can add contact Information.

CALCULATOR

It takes a little skill to create a calculator basic mathematical functionalities using CSS, HTML and JavaScript. Calculators require an interactive interface to perform basic functions such as addition, subtraction, division and multiplication. It will need a display screen to display the user's input and give the results. The grid system in CSS is for the alignments of buttons on the calculator. The additional tools you need to build a fully functional calculator include eventListeners, if-else statements, operators, loops and so on..

TO-DO LIST

Develop a basic to-do app that enables a user to add daily tasks. The to-do web app must allow users to add new items to a list, and items added to a list must be visible. Also, a user can mark a task "complete" upon its successful completion, and these completed tasks must appear on a separate list, say Completed Tasks.

To further increase the web app's complexity or make it more detailed, you can add the date and time when a task is added and/or completed.

ANDROID APP DEVELOPMENT

TASK LIST

For Android App Development internship you need to complete at least 2 task for successful completion of the internship

UNIT CONVERTER APP

This application will aim at helping its users by converting the units from one another. This app will take input from the user and convert it to the desired unit and give the result. For example, it will be able to convert a value in centimeters to Meters or grams to kilograms and vice versa. To develop this application, Android Studio is required. The knowledge of XML would be required for the user interface and the Java programming for the applications conversion functionality.

TO DO APP

This application as the name suggests will be a To-Do list holding app. It'll store the users schedules and their upcoming meetings or events. In this application, users will be enabled to write their important notes as well. To make it safe, provide a login page before the user can access it.

So, this app will have a login page, sign-up page, logout system, and the area to write their tasks, events, or important notes. You can build it in android studio using Java and XML at ease. Using XML you can build the user interface as user-friendly as you can. And to store the users'data, you can use SQLite enabling the users to even delete the data permanently.

CALCULATOR

A calculator will be an easy application if you have just learned Android and coding for Java. This Application will simply take the input values and the operation to be performed from the users. After taking the input itll return the results to them on the screen. This is a really easy application and doesnt need use of any particular package.

QUIZ APPLICATION

Here you can provide the users with Quiz on various general knowledge topics. These practices will ensure that you're able to set the layouts properly and slowly increase your pace of learning the Android application
development. In this you'll learn to use various Layout components at the same time understanding them better.

In the app, questions would be asked and answers would be shown as multiple choices. The user selects the answer and gets shown on the screen if the answers are correct. In the end the final marks would be shown to the users.

JAVA PROGRAMMING

TASK LIST

For java programming internship you need to complete at least 2 task for successful completion of the internship

GUESS THE NUMBER

The fun and easy project "Guess the Number is a short Java project that allows the user to guess the number generated by the computer & involves the following steps:

1. The system generates a random number from a given range, say 1 to 100.
2. The user is prompted to enter their given number in a displayed dialogue box.
3. The computer then tells if the entered number matches the guesses number or it is higher/lower than the generated number.
4. The game continues under the user guessing the number. You can also incorporate further details as:

- Limiting the number of attempts.
- Adding more rounds.
- Displaying score.
- Giving points based on the number of attempts.

ATM INTERFACE

We have all come across ATMs in our cities and it is built on Java. This complex project consists of five different classes and is a console-based application. When the system starts the user is prompted with user id and user pin. On entering the details successfully, then ATM functionalities are unlocked. The project allows to perform following operations:

- Transaction History
- Withdraw
- Deposit
- Transfer
- Exit

ONLINE EXAMINATION

The project should be capable of the following functionalities.

- Login
- Update Profile and Password
- Selecting answers for MCQs
- Timer and auto submit
- Closing session and Logout

DIGITAL LIBRARY MANAGEMENT

The main objective of this project is to provide a complete automated Library by digitizing its each and every functionality. Starting from the book-keeping, issuing of books, fine generation, advance booking and report generation all will be accomplished under one single project. The project will be a web based project with a database server responsible for maintaining every single detall of the Library. It has a very user friendly interface which can easily be operated by any non-technical person.

There are essentially two modules of this software;

• Admin module: Admin will have complete control over the system. Admin has permissions to update, delete or modify any existing record or make a new entry (books and members). • Users: The normal users enjoy only limited privileges. They have a view access to the books. They can browse through the categories, search for a particular book, return and issue a book. They are also provided with an email option in case of a query.

DATA SCIENCE

TASK LIST

For Data Science internship you need to complete at least 2 task for successful completion of the internship

IRIS FLOWER CLASSIFICATION

Iris flower has three species; setosa, versicolor, and virginica, which differs according to their measurements. Now assume that you have the measurements of the iris flowers according to their species, and here your task is to train a machine learning model that can learn from the measurements of the iris species and classify them.

Although the Scikit-learn library provides a dataset for iris flower classification, you can also download the same dataset from here for the task of iris flower classification with Machine Learning.

- DOWNLOAD DATASET FROM HERE

UNEMPLOYEMENT ANALYSIS WITH PYTHON

Unemployment is measured by the unemployment rate which is the number of people who are unemployed as a percentage of the total labour force. We have seen a sharp increase in the unemployment rate during Covid-19, so analyzing the unemployment rate can be a good data science project.

- DOWNLOAD DATASET FROM HERE

TIME SERIES FORECASTING

Forecast future trends or values based on historical data. You can use time series models like ARIMA or Prophet and evaluate the model using metrics like RMSE or MAE.

SPAM EMAIL DETECTION WITH MACHINE LEARNING

We've all been the recipient of spam emails before. Spam mail, or junk mail, is a type of email that is sent to a massive number of users at one time, frequently containing cryptic messages, scams, or most dangerously, phishing content. In this Project, use Python to build an email spam detector. Then, use machine learning to train the spam detector to recognize and classify emails into spam and non-spam. Lets get started!

- DOWNLOAD DATASET FROM HERE

PYTHON PROGRAMMING

TASK LIST

For Python programming internship you need to complete at least 2 task for successful completion of the internship

MASTERMIND GAME

Two players play the game against each other; let's assume Player 1 and Player 2

• Player 1 plays first by setting a multi-digit number.

• Player 2 now tries his first attempt at guessing the number.

• If Player 2 succeeds in his first attempt (despite odds which are highly unlikely) he wins the game and is crowned Mastermind! If not, then Player 1 hints by revealing which digits or numbers Player 2 got correct.

• The game continues till Player 2 eventually is able to guess the number entirely.

• Now, Player 2 gets to set the number and Player 1 plays the part of guessing the number.

If Player 1 is able to guess the number within a lesser number of tries than Player 2 took, then Player 1 wins the game and is crowned Mastermind.

• If not, then Player 2 wins the game.

ROCK PAPER SCISSOR GAME

Winning Rules as follows:

Rock vs paper->paper wins

Rock vs scissor-> Rock win

paper vs scissor-> scissor wins.

CREATING PAYMENT RECEIPT

Creating payment receipts is a pretty common task, be it an e-commerce website or any local store for that matter.

Here, you have to create our own transaction receipts just by using python. We would be using reportlab to generate the PDFs. Generally, it comes as a built-in package but sometimes it might not be present too.

If it's not present, then simply type the following in your terminalr.

RECORD YOUR VOICE

Python can be used to perform a variety of tasks. One of them is creating a voice recorder. We can use python's sounddevice module to record and play audio. This module along with the wavio or the scipy module provides a way to save recorded audio.

C++ PROGRAMMING

TASK LIST

For C++ Programming internship you need to complete at least 2 task for successful completion of the internship

STUDENT RECORD MANAGEMENT SYSTEM

By building this project, you will comprehend the basics of the input and output course. Furthermore, this C++ project structure will help you in knowing about the system of file management. The program designed by you will be ready to accumulate all the students' data and information correctly. This data can be any information related to the student, their personal information, academic records, roll number, etc. This project will teach you how to tackle wrong inputs.

TIC-TAC-TOE

Tic-Tac-Toe isn't very hard to incorporate. Nevertheless, it does help one make use of some of the algorithms that one had learned before. You have to come up with the logic for selecting the winner at the same time, continuously changing players when one player has played their move. Use the socket library to turn the game into a multiplayer game, and it can ve played over the internet by two players.
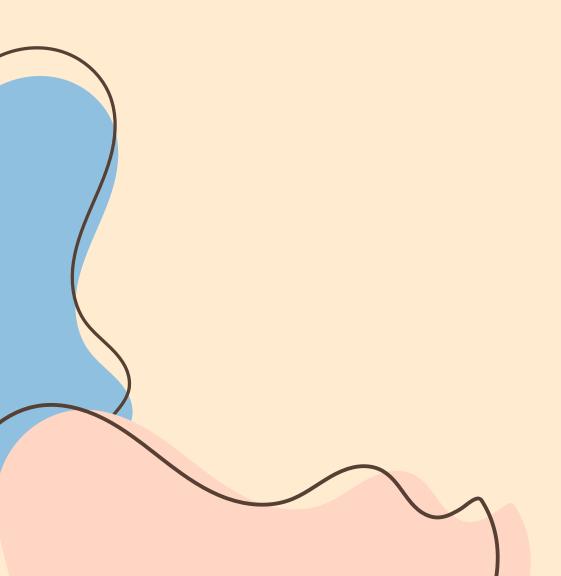
DIGITAL CALCULATOR

This project is particularly GUI-driven, making it easy to execute. This project will be a menu-driven program in which the outputs will be given by the user. It assists to strengthen some of the fundamental concepts of C++, particularly relating data types and decision-making statements.

The project requires validation for the inputs so that the calculation only takes place if the inserted data is numerical by nature. Furthermore, there's some concept of data handling of a particular size. The larger the number, the larger the data type required to handle it. Tackling it properly will also need some skills that will go a long way in enabling one to secure an internship/job in the future..

FACE DETECTION

This project has so much to offer and it is great fun too. It makes use of the OpenCV library for face detection. The code structure grasps the face few seconds..

SOCIALISE

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