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Google Colab Preparation Worksheet

Objective: This worksheet aims to prepare you to effectively use Google Colab, a cloud-based platform for writing and executing Python code. The following questions and tasks will help you become familiar with the basic functionalities of Google Colab.

Question 1: Account Setup

Task: Create a Google account if you do not have one.

Question: Why is it necessary to have a Google account to use Google Colab?

Question 2: Accessing Google Colab

Task: Navigate to the Google Colab website by visiting Google Colab.

Question: What do you see on the Google Colab homepage, and what are the options for creating a new notebook?

Question 3: Basic Notebook Operations

Task: Create a new notebook and name it “My First Notebook.”

Question: Describe the process of renaming a notebook in Google Colab.

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Question 4: Running Code Cells

Task: In your new notebook, write and run a simple Python code that prints "Hello, Google Colab!"

Question: How do you execute a code cell in Google Colab, and what keyboard shortcut can you use to run the current cell?

Question 5: Using Markdown Cells

Task: Add a new text cell and use Markdown to create a heading that says "Introduction to Google Colab" and a bullet list with the items "Python Coding," "Data Analysis," and "Machine Learning."

Question: What is the purpose of Markdown cells in Google Colab, and how do you add a heading and a bullet list using Markdown?

Question 6: Installing Python Libraries

Task: In a new code cell, install the pandas library using pip.

Question: What is the command to install the pandas library in Google Colab, and why might you need to install additional libraries?

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Question 7: Verifying Library Installation

Task: Verify the installation of the pandas library by importing it and printing its version.

Question: Write the code to import pandas and print its version. What is the importance of verifying library installation?

Question 8: Installing and Using Multiple Libraries

Task: Install the matplotlib and scipy libraries, and then create a simple plot using matplotlib.

Question: Write the commands to install matplotlib and scipy. Then, write a code snippet to create a simple plot using matplotlib.

Completion: After answering these questions and completing the tasks, you should have a basic understanding of how to set up and use Google Colab, install necessary Python libraries, and run code cells.

Resources for Further Learning:

- Google Colab Welcome Page
- Google Colab Documentation
- Markdown Guide
- Pandas Documentation
- Matplotlib Documentation
- SciPy Documentation

Feel free to refer to these resources for additional information and advanced features of Google Colab.