# Course One
## Foundations of Data Science

## Instructions

Use this PACE strategy document to record decisions and reflections as you work through this end-of-course project. You can use this document as a guide to consider your responses and reflections at different stages of the data analytical process. Additionally, the PACE strategy documents can be used as a resource when working on future projects.

## Course Project Recap

Regardless of which track you have chosen to complete, your goals for this project are:

- ☑ ~~Complete the PACE Strategy Document to plan your project while considering your audience members, teammates, key milestones, and overall project goal.~~

- ☑ ~~Create a project proposal for the data team.~~
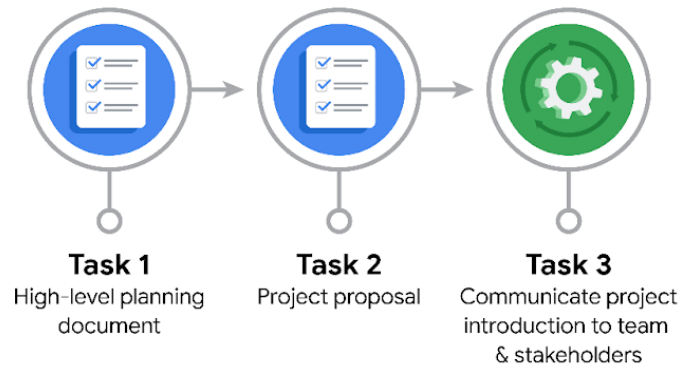
## Relevant Interview Questions

Completing this end-of-course project will empower you to respond to the following interview topics:

- As a new member of a data analytics team, what steps could you take to get 'up to speed' with a current project? What steps would you take? Who would you like to meet with?

- How would you plan an analytics project?

- What steps would you take to translate a business question to an analytical solution?

- Why is actively managing data an important part of a data analytics team's responsibilities?

- What are some considerations you might need to be mindful of when reporting results?

## Reference Guide

This project has three tasks; the following visual identifies how the stages of PACE are incorporated across those tasks.



**Task 1**
High-level planning document

**Task 2**
Project proposal

**Task 3**
Communicate project introduction to team & stakeholders

## Data Project Questions & Considerations



**P**ACE: **Plan Stage**

- Who is your audience for this project?

The New York City Taxi and Limousine Commission (TLC).

- What are you trying to solve or accomplish? And, what do you anticipate the impact of this work will be on the larger needs of the client?

Build a model that predicts taxi and rideshare trips data for most accuracy.

- What questions need to be asked or answered?

Will the model be helpful and solve the problem ?
Will the model predict data for most accuracy ?

- What resources are required to complete this project?

Taxi and rideshare trips data.

- What are the deliverables that will need to be created over the course of this project?

Result of analysis data.

Recommendations based on data.

## THE PACE WORKFLOW



**[Alt-text: The PACE Workflow with the four stages in a circle: plan, analyze, construct, and execute.]**

You have been asked to demonstrate for the company's data team how you would use the PACE workflow to organize and classify tasks for the upcoming project. Select a PACE stage from the dropdown buttons. A few tasks involve more than one stage of the PACE workflow. Additionally, not every workplace scenario will require every task. Refer back to the Course 1 end-of-course portfolio project overview reading if you need more information about the tasks within the project.

## Project tasks

Following are a group of tasks your company's data team has determined need to be completed within this project. The data analysis manager has asked you to organize these tasks in preparation for the project proposal document. First, identify which stage of the PACE workflow each task would best fit under using the drop down menu. Next, give an explanation of why you selected the stage for each task. Review the following readings to help guide your selections and explanation: The PACE stages and Communicate objectives with a project proposal. You will later reorder these tasks within a project proposal.

1. **Evaluating the model:** `Execute ▾`

   Why did you select this stage for this task?

   | |
   |---|
   | Evaluating the model for looking at prediction result. |

2. **Conduct hypothesis testing:** `Analyze ▾` and `Construct ▾`

   Why did you select these stages for this task?

   | |
   |---|
   | Determine hypothesis and then analyze data for prove hypothesis. |

3. **Begin exploring the data:** `Analyze ▾`

   Why did you select this stage for this task?

   | |
   |---|
   | For getting to know better about what data we will use in the project. |

4. **Data exploration and cleaning:** `Plan ▾` and `Analyze ▾`

   Why did you select these stages for this task?

   | |
   |---|
   | Plan what to do with data. |

**5. Establish structure for project workflow (PACE):** `Plan ▾`

Why did you select this stage for this task?

> For guidelines throughout the project.

**6. Communicate final insights with stakeholders:** `Execute ▾`

Why did you select this stage for this task?

> Sharing findings.

**7. Compute descriptive statistics:** `Analyze ▾`

Why did you select this stage for this task?

> Finding correlation in data.

**8. Visualization building:** `Analyze ▾` **and** `Construct ▾`

Why did you select these stages for this task?

> Visualization for data assessment.

**9. Write a project proposal:** `Plan ▾`

Why did you select this stage for this task?

> Determine what to do.

**10. Build a regression model:** **Analyze** ▾ **and** **Construct** ▾

Why did you select this stage for this task?

Finding correlation in data.

**11. Compile summary information about the data:** **Analyze** ▾

Why did you select this stage for this task?

Inspecting a dataset.

**12. Build machine learning model:** **Construct** ▾

Why did you select this stage for this task?

After cleaning data then select what model to build.