

## Final

Due to 11:59 pm 07/28/2024

Follow the instructions below very carefully, please submit your source code named as **FirstName\_LastName.ipynb**

### **Context**

This dataset is originally from the National Institute of Diabetes and Digestive and Kidney Diseases. The objective is to predict based on diagnostic measurements whether a patient has diabetes.

### **Content**

Several constraints were placed on the selection of these instances from a larger database. In particular, all patients here are females at least 21 years old of Pima Indian heritage.

- Pregnancies: Number of times pregnant
- Glucose: Plasma glucose concentration 2 hours in an oral glucose tolerance test
- BloodPressure: Diastolic blood pressure (mm Hg)
- SkinThickness: Triceps skin fold thickness (mm)
- Insulin: 2-Hour serum insulin ( $\mu$ U/ml)
- BMI: Body mass index ( $\text{weight in kg}/(\text{height in m})^2$ )
- DiabetesPedigreeFunction: Diabetes pedigree function
- Age: Age (years)
- Outcome: Class variable (0 or 1)

1. Prepare the provided Diabetes dataset, implement **ONE of the classification techniques** and evaluate the performance using the proper metrics for the binary classification of the variable “Outcome”