Name: . . . .

Term: . . . . **Subject:** . . . . **Machine Learning** . . . .

Teacher: A. Mhamdi

Do not write in this table.

Question:	1	2	3	4	5	6	7	8	9	10	Total
Points:	1	1	1	1	1	1	1	1	1	1	10
Score:											

1. (1 point) Load the necessary modules

[1] :

2. (1 point) Load the dataset *Diabetes.csv*. Assign it to the variable *df*.

[2] :

3. (1 point) Print the first 5 rows of *df*.

[3] :

4. (1 point) Extract the independant and dependant variables as numpy arrays. Classes here are designated by the "Diabetes" column.

[4] :

5. (1 point) Split the data into two sets: train and test. Begin by importing the `train_test_split` from `sklearn` module. Use a ratio of 75 : 25.

[5] :

6. (1 point) Create a classifier using *k-Nearest Neighbors* algorithm. At first, the class `KNeighborsClassifier` has to be loaded. Setup a knn classifier with only $k = 7$ neighbors.

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[6]:
```

7. (1 point) Fit the model.

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[7]:
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[7]: KNeighborsClassifier(n_neighbors=7)
```

8. (1 point) Display the *score* metric on the test set.

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[8]:
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9. (1 point) Make predictions on the X_test using the classifier you built earlier.

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[9]:
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10. (1 point) Import confusion_matrix and print it. Print the score metrics, namely acuracy, precision, recall and f1-score;

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[10]:
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