**CIS 476/566 Graduate Student Term Project**

**Document/Program Due Dates: Monday 12/06/21**

**Demo Time: 12/06/21 6pm**

This project is required for all graduate students. Undergraduate student who chooses to work on this project and successfully finishes it will get additional 10 points. No team work on this project

In this project, you are required to design an open destination vacation-planning tool “MyVacation” that will help users (who know when to leave and come back but do not care where to go) to purchase the most inexpensive air tickets. MyVacation can be a standalone or web-based software with the following functions/features.

* User enters From city, depart date (02/26/2022) and return date (any day between 3/1 – 3/6) with an option to specify destination by country or continent or completely open to any
* Destination is limited to (2 cities per State in US and capital city of each country)
* MyVacation shall provide a GUI or web page to allow users to search
* MyVacation shall return a list of destinations ordered by flight price from low to high.
* By clicking on the destination should MyVacation show available round trip flights and further clicking on the flight should lead user to order flight.
* From city is limited to 5 cities of your choice.
* MyVacation shall crawl the flight information in a daily basis and save them into a local database so that searching results can be displayed immediately.
* The first 25 searched results from local database shall be updated within 1 mins

Searched results from local DB

From City

Reconcile the results

Depart Date

Searched results from real time, only the first 25 from local search

Return Date

You will get bonus points if you can implement the following features

• Any from city instead of only 5 5 pts

• Any depart and return dates. 3 pts

• In addition to flight information, you also provide hotel and rental car information as a package 3 pts

* **Notes:** 
  + **Perform some preliminary analysis on what design patterns you will use to solve the problem.**
  + **Provide detailed design of patterns used in the solution via class diagram with mapping of pattern classes to the actual application classes.**
  + **You are required to use at least 3 design patterns while solving this problem.**
  + **The developed code must be thoroughly commented and synchronized with the model.**
* **Submission**
  + **Submit One .zip file that contains the followings**
    - **Source code**
    - **A report that includes class diagrams and their descriptions, database schema and descriptions, user-interface screen shots and descriptions, references.**