

CSE 483 Final

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Write an application that allows the user to update info about a flight. The info consists of the city that the plane flies from, the city that the plane flies to, the capacity of the flight, the number of reservations of the flight. Initially there are no reservations to the flight. The fare of the flight is also displayed, but can not be edited and is dependent on the capacity of the flight (C) and the number of reservations (R) of the flight as

$$Fare = \frac{100(R + 1)}{C + 1} \quad (1)$$

- 1) (16 points) Design the interface. Make the city from, city to fields editable. The capacity (initial value random between 50 and 100), the number of reservations (initial value 0) are not editable.
- 2) (8 points) Add Java codes to save city state, i.e. the program will remember its cities, that is, it remembers the city from and city to.
- 3) (6 points) Add a button to make a reservation. When the user presses the button, the number of reservations will increase and the corresponding new fare value will be displayed.
- 4) (6 points) Add a button that will display info from a web browser about the city that the plane flies to. Programmatically open google with the city info being searched.
- 5) (6 points) Use Alert Dialog to warn the user if he/she wants to make a reservation although there is no room for reservation (in case of $R = C$).
- 6) (8 points) Use SharedPreferences to save the state info about the capacity and the number of reservations to the flight.
- 7) (12 points) Add two Image views to the application which displays a picture about the city the plane flies from and the city the plane flies to. When the names are changed the program will look the assets folder and if the picture exists it will display the picture. The pictures of the cities are stored in the assets folder as Istanbul.jpg, Roma.jpg, Newyork.jpg etc.
- 8) (12 points) Prepare an options menu. Add a menu item to change the capacity info. When the user selects the menu item, create a custom GUI for a new Alert Dialog to allow the user to enter the capacity of the flight.
- 9) (6 points) Add an alert sound after making a reservation when there are only 5 places left.
- 10) (8 points) Make necessary modifications in Java code such that, when the user shakes the phone, the number of reservations is cleared (set to 0). Fare value must also be updated.
- 11) (12 points) Add another option menu item to save current flight info into the database. All info about the current flight are stored in the database.