

# CSE 483 Bütünleme Exam

Olcay Taner YILDIZ

Write an application that allows the user to update info about a gezi chapulcu. The info consists of the city fragment that the chapulcu is from, the gallons of water ( $G$ ) she can take before she collapses, the gallons of water she has taken ( $T$ ). Initially chapulcu is not chapulling therefore the gallons of water she has taken is ( $T = 0$ ). The health factor of the chapulcu is also displayed, but can not be edited and is dependent on ( $G$  and  $T$ ) as

$$Health = 100 \times \left(1 - \frac{T}{G}\right) \quad (1)$$

- 1) (16 points) Design the interface. Make the city fragment field editable. The gallons of water she can take ( $G$ ) (initial value random between 1 and 10), the gallons of water she has taken ( $T$ ) (initial value 0) are not editable.
- 2) (8 points) Add Java codes to save and load city fragment states (Use Bundle).
- 3) (6 points) Add a button to chapul. When the user presses the button, the chapulcu chapuls and receives water from TOMA. Corresponding new health value will be displayed.
- 4) (6 points) Add a button that will display info from a web browser about the city fragment the chapulcu is from. Programmatically open google with the city fragment info being searched.
- 5) (6 points) Use Alert Dialog to warn the user if she wants to chapul although she has collapsed (in case of  $G = T$ ).
- 6) (8 points) Use SharedPreferences to save and load numbers  $G$  and  $T$ .
- 7) (12 points) Add one Imageview to the application which displays a picture about the city fragment the chapulcu is from. When the name is 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 Taksim.jpg, Besiktas.jpg etc.
- 8) (12 points) Prepare an options menu. Add a menu item to change the gallons of water the chapulcu can take ( $G$ ). When the user selects the menu item, create a custom GUI for a new Alert Dialog to allow the user to enter  $G$ .
- 9) (6 points) Add an alert sound when health is reduced to 20 or less.
- 10) (8 points) When the user shakes the phone, the chapulcu gets help from other chapulcus that is the the gallons of water she has taken decreases by 1.
- 11) (12 points) Add another option menu item to save chapulcu info into the database of Republic of Toma Entertainers. All info about the current chapulcu are stored in the database.