

CTIS 256

Midterm 1

Submission: Through Moodle (do not send me email)

Question 1 (50Pts): Write a Web application that shows the countries and their capital cities in an html table (Fig 1). The country names are links to a page that shows the cities in the clicked country (Fig 2). You are given “*db.php*” file that contains two arrays, *\$countries* and *\$cities*. They contain all related information about countries such as country code, name, capital, area, population, and about cities such as city name and population. First things first, you need to analyze the structure of two arrays to figure out the relation between them. *You should use similar MD Framework components. “teal”, “white”, and “yellow” colors are used in this example. Do not forget to watch the given video file “q1.mp4” that explains what you are supposed to do.*

Countries				
Code	Country Name	Capital	Area	Population
AFG	Afghanistan	Kabul	652090.00	22720000
ALB	Albania	Tirana	28748.00	3401200
DZA	Algeria	Alger	2381741.00	31471000
ASM	American Samoa	Fagatogo	199.00	68000
AND	Andorra	Andorra la Vella	468.00	78000
AGO	Angola	Luanda	1246700.00	12878000

Fig 1: List all countries and their capital cities.

Cities in Afghanistan	
City Name	Population
Herat	186800
Kabul	1780000
Mazar-e-Sharif	127800
Qandahar	237500
GO BACK	

Fig 2: List the cities of clicked country

Grading:

- (15Pts) CSS, Html (use MD Framework)
- (10Pts) Country List
- (5Pts) Country name is a link
- (5Pts) Capital Name
- (10Pts) List cities
- (5Pts) Country name in the city page with different color.

Question 2 (50Pts): Write a web application that calculates the price of a rental car. As you can see in Figure 3, it asks for the number of months to rent the car, and some options about the car. The month number must be minimum 6 months and it must be multiple of 6 such as 6, 12, 18, 24 and so on. The base price of the rental car is 1000 ₺ per month, and the prices of options for Automatic Transmission, Navigation and Diesel are 200 ₺, 100 ₺ and 300 ₺ respectively.

The only field you need to validate is month. If it is not valid, display an error message such as "invalid" in red color after the textbox.

The form must remember previously submitted data (*both in error and succes case*) , and it shows the result below the web form, Figure 4.

Rent a Car

Months

18

☒ Automatic Transmission ☐ Navigation ☒ Diesel

RENT ➤

Figure 3: Web Form

Rent a Car

Months

18

☒ Automatic Transmission ☐ Navigation ☒ Diesel

RENT ➤

Due Date	AT	Navigation	Diesel	Price
17 September 2022	YES	NO	YES	27000 ₺

Figure 4: Result of the Calculation

The result will calculate due date, and the price. Due date will be found by adding the number of months to today. It displays due date in “d F Y” format. It also shows the state of selected options as “YES” or “NO”.

The application must prevent any injection attacks.

Html code for “₺” (turkish lira symbol) is [₺](#)

Do not forget to watch the given video file “[q2.mp4](#)” that shows what you are supposed to do.

Grading:

- (10Pts) MD Framework Components (table, ui elements)
- (15Pts) Month Validation
 - (8Pts) Validation
 - (4Pts) Display Error “Invalid” in red, if it is invalid.
 - (3Pts) Sanitize month field,
- (8Pts) Calculate Price
- (4Pts) Due Date
- (3Pts) “YES” or “NO” for options.
- (10Pts) Sticky Form (remember previously submitted data)

Attention:

- You have to upload your exam (name_surname.zip) file through **moddle**. Do not send me email.
- If you submit your work within 10 minutes after due, you will be penalized by 15pts. The submission will be closed after 10 minutes.
- Send correct files, and don’t forget to include all required files to run your programs.
- Cheating will not be tolerated, and I will inquiry about your exam in any suspicious situations
- You are free to use any editor for coding.