

APCSP 2021 Project

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1 //APCSP2021 Project
2 //Global Variable Declarations
3 var countriesList =getColumn("World Happiness Report 2019", "Country or region");
4 var overallScoresList =getColumn("World Happiness Report 2019", "Score");
5 var overallRanksList =getColumn("World Happiness Report 2019", "Overall rank");
6 var gDPPerCapitaScoresList =getColumn("World Happiness Report 2019", "GDP per capita");
7 var socialSupportScoresList =getColumn("World Happiness Report 2019", "Social support");
8 var healthyLifeExpectancyScoresList =getColumn("World Happiness Report 2019", "Healthy life expectancy");
9 var country="";
10 var score=0;
11 var rank="";
12 var index=0;
13 var worseCountries = 0;
14
15
16 //Event Handlers
17 onEvent("nextButton1", "click", function( ) {
18     setScreen("selectionScreen");
19 });
20 onEvent("nextButton2", "click", function( ) {
21     setScreen("rankingComparisonScreen");
22 });
23 onEvent("backButton2", "click", function( ) {
24     setScreen("informationScreen");
25 });
26 onEvent("backButton3", "click", function( ) {
27     setScreen("selectionScreen");
28 });
29 onEvent("countriesDropdown", "change", function( ) {
30     country = getText("countriesDropdown");
31     findRankingAndScore();
32     setText("outputGDPPerCapitaRanking", betterThan(gDPPerCapitaScoresList[index],gDPPerCapitaScoresList));
33     setText("outputSocialSupportRanking", betterThan(socialSupportScoresList[index],socialSupportScoresList));
34     setText("outputHealthyLifeExpectancyRanking", betterThan(healthyLifeExpectancyScoresList[index],healthyLifeExpectancyScoresList));
35 });
36 onEvent("randomCountryButton", "click", function( ) {
37     index= randomNumber(0, countriesList.length-1);
38     country=countriesList[index];
39     findRankingAndScore();
40     setText("countriesDropdown", country);
41     setText("outputGDPPerCapitaRanking", betterThan(gDPPerCapitaScoresList[index],gDPPerCapitaScoresList));
42     setText("outputSocialSupportRanking", betterThan(socialSupportScoresList[index],socialSupportScoresList));
43     setText("outputHealthyLifeExpectancyRanking", betterThan(healthyLifeExpectancyScoresList[index],healthyLifeExpectancyScoresList));
44 });
45
46
47 //Function Declarations
48
49 //Displays the overall ranking and overall score of the country on the outputCountryRanking
50 //element by traversing through the countriesList to find the index of the country and
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51 //corresponding rank and score and the same index on the overallRanksList and overallScoresList
52 function findRankingAndScore() {
53   for (var i = 0; i < countriesList.length; i++) {
54     if (country==countriesList[i]) {
55       index = i;
56       rank = overallRanksList[i];
57       score = overallScoresList[i];
58     }
59   }
60   setText("outputCountryRanking", "This country was ranked number "+rank+" and has a score of "+score+" out of 10 in the World Happiness Report of 2019 for the happiness of its inhabitants.");
61 }
62 //Displays the number of countries the current country is better than and its rank in all countries
63 //based on the score of the country and the full list of all scores in that category
64 //score {number} - the country's score in the specific category desired
65 //list {list of numbers} - scores of all countries in the specific category desired
66 //return {string} - displays the rank of the country and how many countries it is better than
67 function betterThan(score,list) {
68   worseCountries = 0;
69   for (var i = 0; i < list.length; i++) {
70     if (list[i]<score) {
71       worseCountries = worseCountries+1;
72     }
73   }
74   if (worseCountries==0) {
75     return "This country is unfortunately ranked last in this category.";
76   } else if (worseCountries==155) {
77     return "This country is ranked first in this category!";
78   } else {
79     return ("This country is ranked at number "+(156-worseCountries))+ " and is better than "+ worseCountries+ " countries in this category.";
80   }
81 }
82 //the image used in this app came from:
83 //worldHappinessReportImg- https://www.comunicaffe.com/for-the-5th-consecutive-year-illycaffe-is-a-partner-of-the-world-happiness-report/
84 //the original image came from research from:
85 //https://www.happinessresearchinstitute.com/blog/categories/reports
86 //the dataset used in this app came from:
87 //World Happiness Report- https://www.kaggle.com/unsdsn/world-happiness?select=2019.csv
88 //the original research for the dataset comes from:
89 //https://worldhappiness.report/ed/2019/#appendices-and-data
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