Team 5

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**Input and Output**

**Inputs**

Number of Countries

For subject

Subject Name

For Person

Person Name, Person Gender, Person Age, Country of Residence, and subject

For Educator

Duration and Work Hours Day

For Subject

IsAttending, HasPassed, Transport Needed, and distance from School

For School:

School Name, Number of Children, Weekly Foods, People

For Country:

Number of Schools, Country Name, Schools.

**Output**

* Remuneration
* Trip fare
* Pass rate
* Fail rate
* Male dropout rate
* Female dropout rate
* Literacy rate
* Display of input data

**Interface**

|  |
| --- |
| Team 5 Gov |
| |  | | --- | |  |  |  | | --- | | Display Info |  |  | | --- | | Best and worst countries |  |  | | --- | | Capture data |  |  | | --- | | Country Status | |

**Events and Action**

|  |  |
| --- | --- |
| **Events** | **Actions** |
| 1.btnCaptureData | * Resize arrays * Acquire country data * Instantiation * Save to file |
| 2.btnDisplayinfo | * Display country information |
| 3.btnCountryStats | * Acquire country stats * Display country stats |
| 4.btnWorstandBestCountries | * Calculate and display the best and worst countries. |

**Variables**

* Countries : Country()
* File name: String
* FS: FileStream
* BF: BinaryFormatter

**Pseudocode**

btnCaptureData:

numCountries <- prompts the user to enter the number of countries

resize the countries array

for each country in countries array

countryName <- prompts the user to enter country name

numSchools <- prompts the user to enter number of schools

create a new country

for each school in school array

schoolName <- prompts the user to enter the school name

schoolPersonale <- prompts the user to enter the number of school personale

create a new school

for each person in school

personName <- prompts for person name

personage <- prompts for person age

personGender <- prompts for person gender

numSubject <- prompts for number of subjects

typeOfPerson <- check if student / educator

if student

create new student

else if educator

create a new educator

FS <- new filestream object

BF <- new binary formatter object

For each country in countries

BF.serialize(FS,country)

FS.close()

btnDisplayInfo:

clear the display

if file exists

FS = new file stream object with read rights

BF = new binary formatter object

While FS.position < FS.length

Countries(c) <- BF.Deserialize(FS)

FS.close()

For each country in countries

Display country information including each school

btnWorstAndBestCountries:

worstCountry <- countries(1).calcRate

worstIndex = 1

bestIndex = 1

bestCountry<- countries(1).calcRate

for h = 1 to coutries array length -1

if countries(h).calcRate < worstCountry

worstCountry <- countries(h).calcRate

worstIndex <- h

display worstCountry details

for h = 1 to coutries array length -1

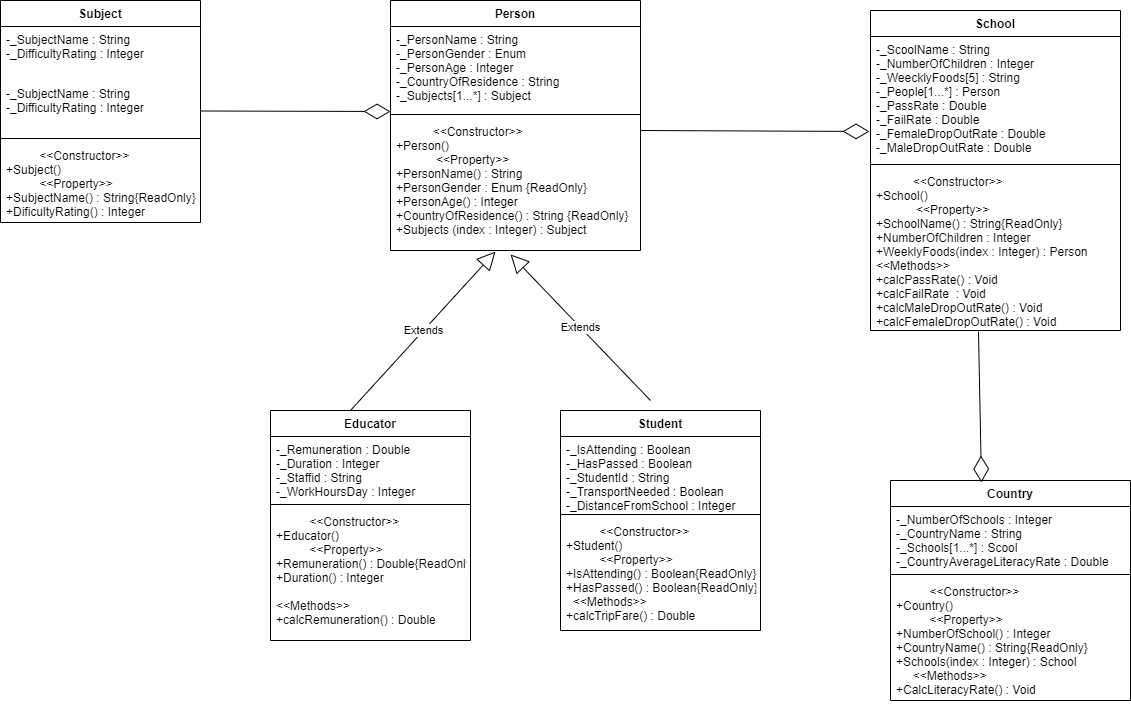
if countries(h).calcRate > bestCountry

bestCountry <- countries(h).calcRate

bestIndex <- h

display bestCountry details

**UML**

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**Test data**

|  |  |
| --- | --- |
| Educator class | |
| Persons Name | Jackie |
| Persons Gender | Female |
| Persons Age | 30 |
| Country of Residence | South Africa |
| Remuneration | 20.4 |
| Duration | 6 |
| Staff ID | 175 678 456 |
| Work Hours Day | 7 |
| Calc Remuneration |  |

|  |  |
| --- | --- |
| Student class | |
| Persons Name | Roman |
| Persons Gender | male |
| Persons Age | 20 |
| Country of Residence | South Africa |
| Is attending | yes |
| Has Passed | yes |
| Student ID | 21 111 7467 |
| Transport Needed | No |
| Distance from school | 4 |
| Amount for transport | R9 |
| Trip Fare | R36 |

|  |  |
| --- | --- |
| Subject Class | |
| Subject Name | Mathematics |
| Difficulty Rating | 95 |

|  |  |
| --- | --- |
| School Class | |
| School Name | Auckland Park Secondary School |
| Number of Children | 1040 |
| Weekly food | 6050 |
| Pass Rate | 50% |
| Fail Rate | 40% |
| Female Dropout rate | 12.9% |
| Male dropout rate | 20.8% |

|  |  |
| --- | --- |
| Country | |
| Number Of schools | 23 000 |
| Country Name | South Africa |
| Country Average Literacy Rate | 87% |
| Literacy rate |  |