

CSCI 3901 Black Box test cases and plan for feature development

Objective : The course project is the opportunity to demonstrate all of the concepts from the course in one body of work.

Report by:

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Test Cases

Person Identity

Name

- Name is empty string
- Name is null
- Name with only letters
- Name with special characters
- Adding Name when there is no entry in database
- Adding Name when there are already few entries in database
- Adding Name which is already there in database

DOB, DOD, Location

- With valid DOB
- Check when month is zero
- Check with date is zero
- Check when year is zero
- Check when month value is > 12
- Check when date value is > 31
- Check when year value contains less or more digits than 4
- DOB which is in 17th, 18th century (approx 300 years old as boundary case)
- Location of birth is empty
- Location of birth is null
- Location of birth with special characters in it
- With valid DOD (Data of Death)
- DOD which is in 17th, 18th century (approx 300 years old as boundary case)
- Location of death is empty
- Location of death is null
- Location of death with special characters in it
- When DOD is early then DOB
- Entering duplicate value for DOB
- Entering duplicate value for DOD
- Entering duplicate value for birth location

- Entering duplicate value for death location

Gender

(Assuming there are 3 allowed values for gender)

- Entering value MALE in gender field
- Entering value FEMALE in gender field
- Entering value Other in gender field
- Entering value of gender other than Male, Female or other
- Gender value is empty

Occupation

- Same occupation for all person data
- Different occupation for all person data
- Occupation with numeric values in it
- Occupation with Special characters in it
- Occupation field is empty for all person data
- Occupation field is empty for some person

Reference

- Record unique reference value for all person
- Record same reference value for all person
- Record multiple values for single person
- Reference is empty for a particular person
- Reference is null for a particular person

Note

- Record unique Notes value for all person
- Record same Notes value for all person
- Record multiple Notes for single person
- Note is empty for a particular person
- Note is null for a particular person

addChild

- When parent is not having any child
- When parent is having 1 child already
- When child is not known to the database
- When parent is not known to the database
- When the child is already having parent in the database and we again try to add new parent
- Adding a child relationship with whom, who is already partnered with other person
- Adding a person as child, with whom there is already a partnered relationship existing
- Adding child relationship with siblings
- Adding child relationship with the one who is already a child of another person
- Adding child relationship with the one who is already child of that person
- Add child relationship to person, who are parent already

recordPartnering

- Partner person1 with person2 when both are single
- Partner person1 with person2, when person2 is not know to database
- Partner person1 with person2, when person1 is not know to database
- Partner person1 with person2, when person1 is already partnered with another
- Partner person1 with person2, when person 2 is child of person1
- Partner person1 with person2, when person2 is parent of person1
- Partner person1 with empty name of person 2
- Partner person2 with empty name of person 1
- Partner person1 and person 2 when both are biologically connected
- Partner person 1 and person 2 again, after dissolution
- Partner person 1 and person 2 when they both have 3-4 generations after them

recordDissolution

- When person1 and person2 are partners
- When person1 and person2 are single
- When person 1 and person2 are partners but they are different couples

- When person 1 is not known to database
- When person 2 is not know to database
- When person 1 and person2 both are partners with one child
- When person 1 and perosn2 both are partners with more than one child
- When person 1 and person 2 both have parents
- When person 1 and person 2 does not have parents
- When person 1 and person 2 both are partners and they have 3-4 generations after them

Media Archive

fileLocation

- fileLocation is empty string
- fileLocation is null
- fileLocation with only letters
- fileLocation with special characters
- Duplicates fileLocation
- Enter fileLocation data when there is no data in Media Archive
- Enter fileLocation data when there is already some data in Media Archive
- When fileLocation has one character as a value

Date

- Date is in 16th or 17th century
- Date is empty
- Date is in wrong format
- Date is in future
- Check when month is zero
- Check with date is zero
- Check when year is zero
- Check when month value is > 12
- Check when date value is > 31
- Check when year value contains less or more digits than 4

Location

- Location is empty
- Location is null
- Location field is having special characters
- All media fields has same location data
- All media files has unique location data
- Check when user tries to enter more than one location
- When location has just one character in it

Tags

- Tag is empty
- Tag is null
- Tag is having special characters in it
- Tag is having similar data for more than one media files
- Tag is having just one character data for particular file

Individuals seen

- Field is empty
- Field is having just one character in it
- Field having person's name which is not known to database
- Field having person's name which is known to database
- Field having more than one person's name
- Field having just one person's name

Reporting

findPerson

- Find person which is known to database
- Find person whose is not know to database
- Find person whose ie having special character in the name
- Find person who has just one character in the name

findMediaFile

- Find file which is known to database
- Find file which is not known to database
- Find file which has just one word in fileName
- Find file which has special characters in fileName

findRelation

- When person1 and person2 are father and son
- When person1 and person2 are father and daughter
- When person 1 and person2 are grandfather and granddaughter
- When person 1 and person 2 are partners
- When person 1 and person 2 are siblings
- When person 1 and person 2 are same
- When person 1 is not known to database
- When person 2 is not known to database
- When person1 and person 2 are not biologically connected
- When person 1 is nibbling of person 2
- When person 1 is nibbling of person 2

Descendants

- When person 1 is now known to database
- When person 1 is child and does not have any descendants
- When person 1 has 4 descendants and argument asks for 6
- When person has 4 descendants and argument asks for 2
- Argument with number of generations is zero
- Argument when person name is empty
- Argument when person name is null

Ancestors

- When person 1 is not known to database
- When person1 is not related to anyone and does not have any ancestors recorded in db
- When person 1 has 4 Ancestors and argument asks for 6

- When person 1 has 4 Ancestors and argument asks for 2
- When argument has generations as zero
- When argument has person name which is not known to database
- Person argument is empty
- Person argument is null

Notes and References

- Search with a valid person in database
- Search with a person, which is not known to database
- Search with a person, which does have Notes and references data
- Search with a person, which does not have Notes and Reference data
- When person contains multiple notes or references
- When person contains only one note or references
- When a person 's argument is null.
- When a person's argument is empty.

Media by Tag

- Search with a valid Tag database
- Search with a Tag, which is not known to database
- Search for Media file which has data in Tags field
- Search for Media file which does not have data in Tags field
- When same tag value is assigned to multiple media files
- When a tag is only linked to one single media file
- When a tag argument is null
- When a tag argument is empty.
- When start date is smaller than end date
- When start date is bigger then end date
- When start Data is zero
- When endDate is zero

Media by Location

- Search with a valid location database
- Search with a location, which is not known to database
- Search for Media file which has data in location field
- Search for Media file which does not have data in location field
- When same location value is assigned to multiple media files
- When a location is only linked to one single media file
- When a location argument is null
- When a location argument is empty.
- When start date is smaller than end date
- When start date is bigger then end date
- When start Data is zero
- When endDate is zero
- When data is passed as null

findIndividualsMedia

- Find with list of people known to database
- When list only contains one person name
- When list of people is empty
- When list of people contains few names which are not known to database
- When list contains people which are not known to database
- When list contains people name with special characters
- When start date is smaller than end date
- When start date is bigger then end date
- When start Data is zero
- When endDate is zero
- When data is passed as null
- When no media files is there in database in the specified date range
- When all media files are in the specified date range
- Check for files who does not have Date
- Check the order of files returned

findBiologicalFamilyMedia

- Find files with person who has 1 children
- Find files with person who has many children
- Find files with person who has no children
- Find files with person who is not known to database
- Check the order of files returned
- Check for files which does not have dates
- When person identity is passed as empty
- When person identity is passed as null
- When person has more than 3 descendants
- When person has more than 3 ancestors

Plan of feature development

Here, I am sharing my step by step development of features and their testing methodology

Step 1: Expected date of completion: 22/11/2021

1. Create database for Person Identity
2. Have method functional for adding person name
3. Check that method call with proper person name is making entry in database
4. Test the method for positive and negative test cases

Step 2: Expected date of completion: 24/11/2021

1. Create methods to enter different attributes of Person Identity
2. Test the methods for positive and negative test cases

Step 3: Expected date of completion: 25/11/2021

1. Create method to enter fileName in database for mediaIdentifier
2. Test the method for positive and negative test cases

Step4: Expected date of completion: 25/11/2021

1. Create method to enter different attributes for mediaIdentifier
2. Test the method for positive and negative tests cases

Step5: Expected date of completion:29/11/2021

1. Functionality to return the media files with help of methods, which does not require family tree details
2. Example: findPerson, findMediaFiles, find by location, findby Tag, findby Notes, etc

Step6: Expected date of completion:03/12/2021

1. find media files based on "Individual seen" attribute

Step7: Expected date of completion:07/12/2021

1. Create family tree based on the PersonIdentity Data
2. Create method findRelations and generate proper biological data.

Step 8: Expected date of completion:

1. Intermediate Testing of all features till now (07/12/2021)

Step 9: Expected date of completion: (08/12/2021)

1. Fixing errors found in above step

Step 10: Expected date of completion:10/12/2021

1. Find mediaFiles based on biological relation of person

Step 11: Expected date of completion:12/12/2021

1. Code cleaning and final testing