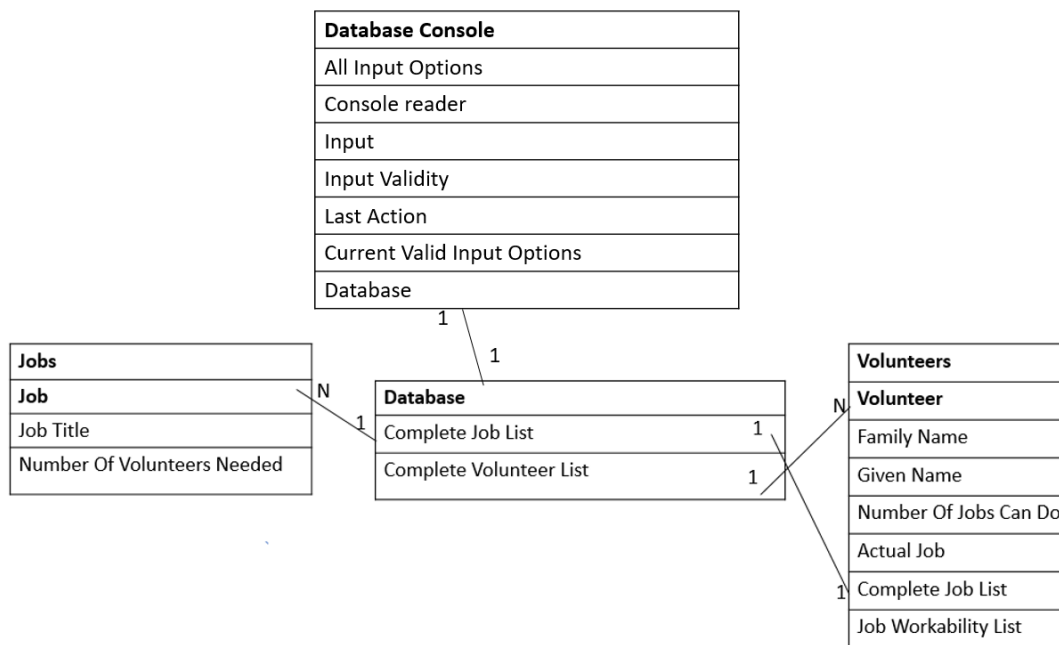


Entity Relationship Diagram



Objects and their fields and datatypes

Object: Job

Field Name	Data type	Description	Other Information
jobTitle	String	The job title of this job	
numberOfVolunteersNeeded	int	The number of volunteers needed for this job	Is always greater than 0

Object: Volunteer

Field Name	Data type	Description	Other Information
actualJob	Job	The actual job of this volunteer	
canDoJob	Boolean[]	The ability of this volunteer to do each job corresponding to the index of the Boolean array	Size of array is equal to number of jobs
familyName	String	The family name of this volunteer	
givenName	String	The given name of this volunteer	
job	ArrayList <job>	The complete list of jobs in the database of this volunteer	
numberOfJobsCanDo	int	The number of jobs this volunteer can do	

Object: Database

Field Name	Data type	Description	Other Information
job	ArrayList<job>	The complete list of jobs in this database	
jobsHaveBeenAssigned	Boolean	If jobs have been assigned yet	
volunteer	ArrayList<volunteer>	The complete list of volunteers in this database	

Object: Database Console

Field Name	Data type	Description	Other Information
OPTION	Int[]	The standard numbers that can be selected to traverse different menus	Are the numbers ranging from 1-8
consoleReader	BufferedReader	The buffered reader of the console	
database1	Database	The database for this console	Size of array is equal to number of jobs
input	String	The console input	
inputIsValid	Boolean	If the input from console is one of the inputs allowed	
lastAction	enum LastAction	The last action done by the database	Possible Last Actions are: ADD_JOB, ADD_VOLUNTEER, ASSIGN_VOLUNTEERS_TO_JOBS, DELETE_JOB, DELETE_VOLUNTEER, INVALID_INPUT, NONE
validInputOption	int[]	The scenario-specific numbers that can be selected to do unique actions	

Proposed Queries

Query Name	Description
displayGivenJob	Prints out the information of a job, given its job title
displayGivenVolunteer	Prints out the information of a given volunteer, given its family and given name.
displayLastAction	Prints out the last action done by the database

Proposed Forms

Form Name	Description
addJob	Given its name and number of volunteers needed, adds job to the end of the job list
addVolunteer	Given its name and jobs they are able to do, adds the volunteer to the end of the volunteer list

Proposed Reports

Report Name	Description
displayActualJobsOfVolunteers	Prints out the volunteers and their actual jobs beside their name
displayCurrentJobs	Prints out the titles of the current jobs added and the number of volunteers it needs
displayCurrentVolunteers	Prints out the names of the volunteers and the jobs they feel comfortable working in
displayJobsAndTheirVolunteers	Prints out the jobs and prints out the volunteers of each job below each job.
displayExtraJobs	Prints out the jobs that still require volunteers
displayVolunteersWithoutJobs	Prints out volunteers that don't have jobs

Proposed Tests

Test Type	Test	Example of success
Forms function	Input data in a form and see if it is maintained correctly	Inputting a job with a job title and number of volunteers required will create a new job with that job title and number of volunteers, and add it to the end of the job list
Queries Function	Command the console the output a specific object	Input in console the command to print out a specific volunteer of a given family and given name and see if the correct volunteer information is printed
Relationships function	Change instance fields in one object to see if it properly affects other objects	When a volunteer is assigned a job in the volunteer class, that specific job needs one less volunteer
Reports Function	Command the console to output a report	When the command to print out the list of volunteers without jobs is given, it is done

