|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Id | Data | Des | Var/Con | In/out/local |
| SIZE | int | Size of arrays | con |  |
| text | string | Line of text | Var | in |
| acronyms | String [] | Acronyms array | Var | In |
| trans | String [] | Translate array | Var | In |
| usage | int [] | Uage array | Var | in |
| validNo | int | Valid no of elements | Var | in |
| numReplace | int | No of replacements | Var | out |
| word | String | To be read from text | Var | local |
| index | int | Payment Option | Var | local |
| valid | boolean | Used in intreadrange for do while loop | Var | local |
| file | File | File to be trans name | Var | local |
| input | string | Local string input in method | Var | Local |
| noValid | int | Valid no of elements after delete | Var | out |
| maxAcr | string | Max used acronym name | Var | out |
| minAcr | string | Max used acronym name | Var | out |
| max | Int | times Max acronym used | Var | out |
| min | Int | times Max acronym used | Var | out |
| addacr | string | Acronym to be added | var | Local |
| addtrans | string | Translation to be added | var | Local |

Psuedo code

**Readdictionary**

public static void readDict(File file, String[] acronyms, String[] trans, int[] usage)

while(file.hasNext())

acronyms[i] = file.next();

//eats up line

file.nextLine();

trans[i] = file.nextLine();

num[i] = file.nextInt();

i++;

**Validno**

public static int readInt(string[] trans)

int Validno = 0;

for (int a=0; a<=trans.length-1; a++)

if (trans[a]!=null)

validno += 1

return validNo

**readInt**

public static int readInt()

while keyboard doesn’t have next int

print “please enter an int”

return keyboard.nextInt

**readIntRange**

public static int readIntRange(int a, int b)

int input;

boolean valid= false;

do

input = readInt()

if input less than a and higher than b

print "Invalid input. Enter " + a + " - " + b + ": "

else valid = true

while (not valid)

return input

**general**

public static void gen(String[] acronyms, String[] trans, int[] usage)

int opt;

print("General User settings:\n1. Keyboard input\n2. File input\n3. Statistics");

readIntRange(1, 3)

if (opt == 1)

keyboardInput();

else if (opt == 2)

fileInput();

else

statistics(acronyms, trans, num);

**admin**

public static void admin(String[] acronyms, String[] trans, int[] num)

int opt;

print("Administrator settings:\n1. View all acronyms\n2. Add an acronym\n3. Edit an acronym\n4. Delete an acronym\n5. Statistics");

readIntRange(1, 5)

if (opt == 1)

viewallacronyms(acronyms, trans, num);

else if (opt == 2)

Addacronym();

else if (opt == 3)

editacronym(acronyms, trans, num);

else if (opt == 3)

deleteacronym(acronyms, trans, num);

else

statistics(acronyms, trans, num);

**fileinput**

public static void fileinput(String[] acronyms, String[] trans, int[] usage)

translateline(getValidFile())

**translateline**

public static int translateline (string text, String[] acronyms, String[] trans, int[] usage ,int validno)

int numreplacemets = 0

while another word to be read

read word

find word in acronyms

if present in acronyms

print translation

increment usage stats

increment numreplacemets

else

print word

end while

return numreplacements

**getValidFile**

public static File getValidFile()

File file;

do

System.out.print("Enter the name of a file: ");

String filename = keyboard.nextLine();

file = new File(filename);

if (!file.exists())

System.out.println("The specifed file does not exist"

+ " - please try again!");

while(!file.exists());

return file;

**translatekeyboard**

public static void fileinput(String[] acronyms, String[] trans, int[] usage)

string line

print”please enter sentence to be translated”

line = keyboard

translateline(line)

**statistics**

public static void statistics(String[] acronyms, String[] trans, int[] num)

int opt

System.out.println("Statistics\nplease enter the statistics you wish to view\n1. The usage statistics for a specific acronym the program has in its dictionary.\n2. The usage statistics for all acronyms the program has in its dictionary.\n3. The most frequently used acronym.\n4. The least frequently used acronym.");

opt = readIntRange(1,4);

if (opt == 1)

viewSingle(acronyms, trans, num);

else if (opt == 2)

allAcronymStats(acronyms, trans, num);

else if (opt == 3)

most(acronyms, num);

else

least(acronyms, num);

**viewSingle**

public static void viewSingle(String[] acronyms, String[] trans, int[] num)

String input;

System.out.println("to view an acronym stats please enter, the acronym");

input = keyboard.nextLine();

for(int i = 0; i < num.length; i++)

{

if(input.equalsIgnoreCase(acronyms[i]))

{

System.out.println("acronym\ttranslation\tTimes Used");

System.out.println(acronyms[i] + " : " + trans[i] + " : " + num[i]);

**allAcronymStats**

public static void allAcronymStats(String[] acronyms, String[] trans, int[] num)

System.out.println("these are all the acronyms and there translations and the number of times they were used");

for(int i = 0; i<acronyms.length; i++)

System.out.println(i + 1 +". " + acronyms[i] + " : " + trans[i] + " : " + num[i]);

**Most**

public static void most(String[] acronyms, int[] num) {

String maxAcr ="";

int max;

max = num[0];

for(int i = 1; i < num.length; i++)

{

if(num[i] > max)

{

max = num[i];

maxAcr = acronyms[i];

}

else if(num[i] == max)

{

maxAcr += ", " + acronyms[i];

}

}

System.out.println("the max acronym is " + maxAcr + " and it was used " + max + "times");

**Min**

public static void least(String[] acronyms, int[] num) {

String minAcr ="";

int min;

min = num[0];

for(int i = 1; i < num.length; i++)

{

if(num[i] < min)

{

min = num[i];

minAcr = acronyms[i];

}

else if(num[i] == min)

{

minAcr += ", " + acronyms[i];

}

}

System.out.println("the min acronym is " + minAcr + " and it was used " + min + "times");

**Viewall**

public static void Viewall(int validNo, String[] acronyms)

print acronym[0 to (validNo-1)}

**addacronym**

public static void addAcronym(file dict, int validno, String[] acronyms, string [] trans, int[] usage)

string addacr, addtrans;

print enter the acronym to be added

acr = keyboard

add acr to acronym[validno +1]

print enter the acronym translation

trans = keyboard

add trans to trans[validno +1]

usage[validno +1] = 0

write to dict file

**editacronym**

public static void editAcronym(file dict, String[] acronyms, validno)

string input

print enter the acronym to be edited

input = keyboard

for(int i = 0; i < validno; i++)

if(input.equalsIgnoreCase(acronyms[i]))

print enter what you wish to change it to

input = keyboard

else

print no such acronym. Please enter an acronym contained in the dictionary file

write to dict file

**deleteacronym**

public static int deleteAcronym(file dict, int validno, String[] acronyms, string []trans, int[] usage)

string input;

int noValid = 0

print enter the acronym to be deleted

input = keyboard

for(int i = 0; i < validno; i++)

if(input.equalsIgnoreCase(acronyms[i]))

acronyms[i] = acronyms[validno]

acronyms[validno] = “null”

trans [i] = trans [validno]

trans [validno] = “null”

usage [i] = usage [validno]

usage [validno] = 0

noValid = validNo -1

else

print no such acronym. Please enter an acronym contained in the dictionary file

write to dict file

return noValid