

# AP Computer Science

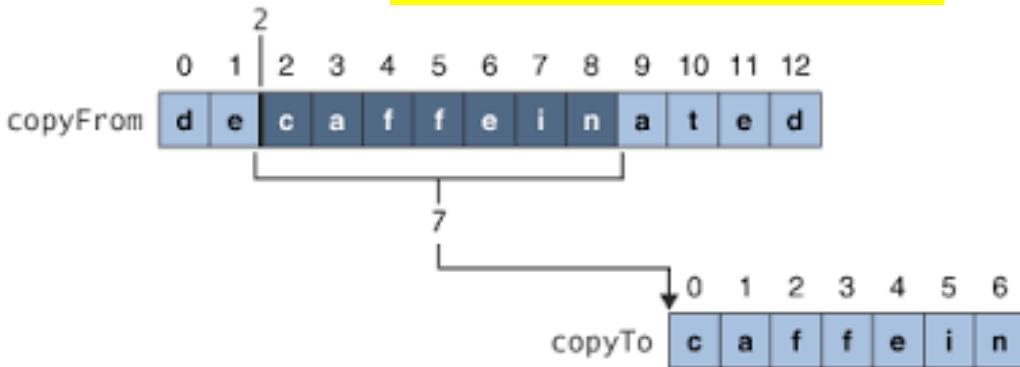


## mr Hanley



### Homework: Copying from Arrays

Last Updated: **12/6/2017 10:05 AM**



Copying from partially filled arrays is an important skill for a programmer!

You will maintain 3 arrays of Strings.

The first array contains foods that you might try someday.

The second list contains foods you've already tried.

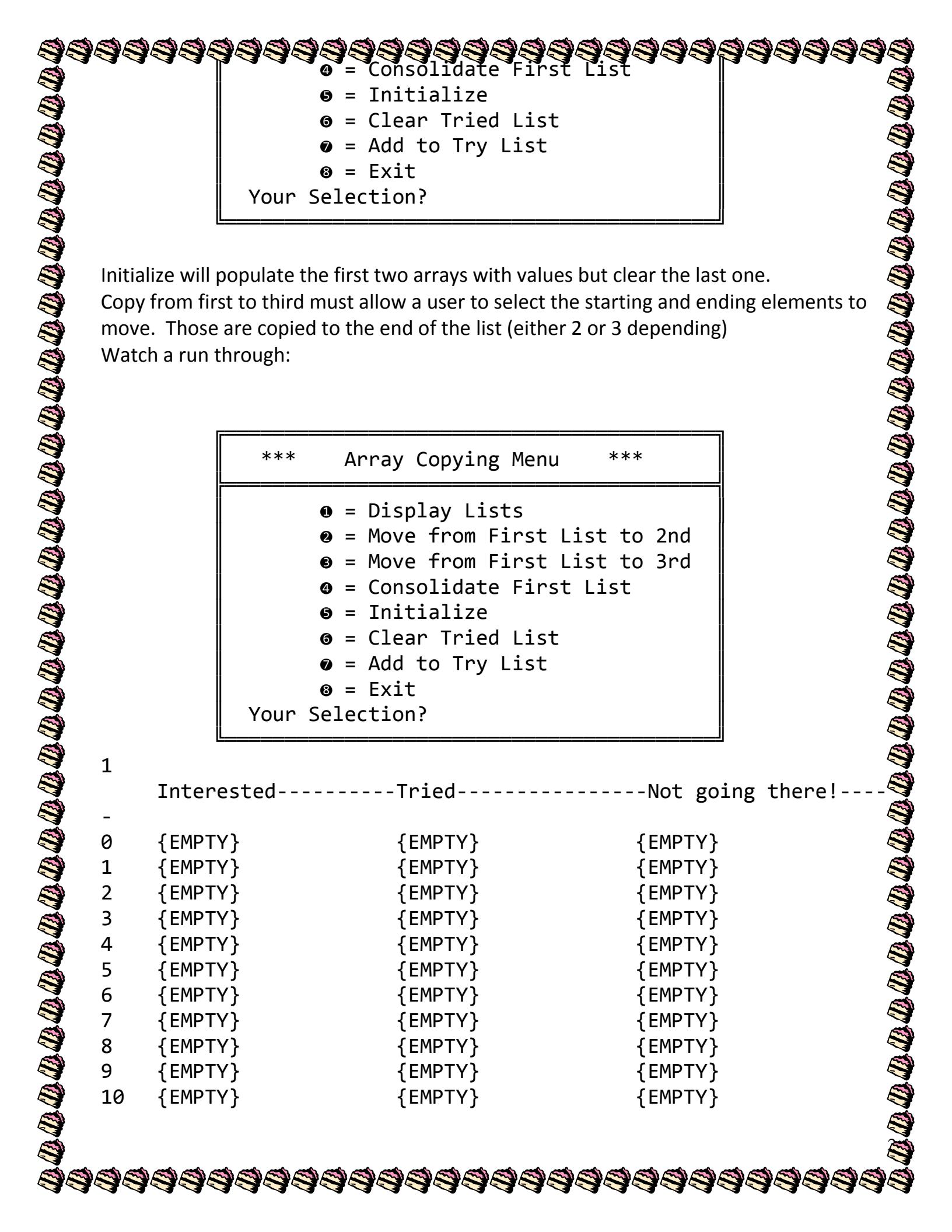
The third list is foods you have decided you are NOT going to try.

Provide a menu so a user can display all of the list at the same time

**NOTE:** If you are looking for where to insert a food to try for option 7, you need to check for a null String or an empty String, either one is a spot to put the new food

```
if(tryList[i] == null || tryList[i].equals("")) {  
    //we can put a new food here  
}
```

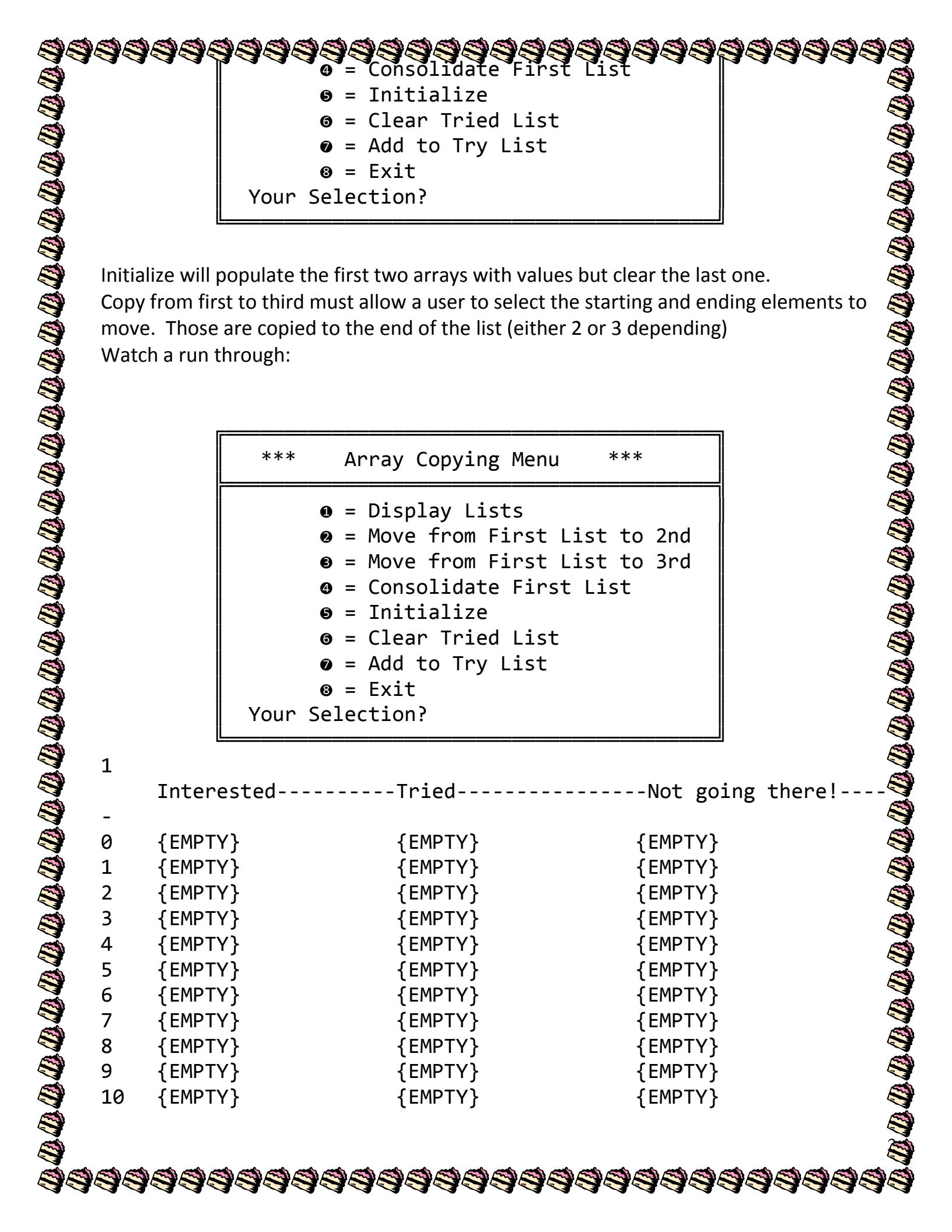
*** Array Copying Menu ***	
①	= Display Lists
②	= Move from First List to 2nd
③	= Move from First List to 3rd


 A decorative border made of 3D-style cake icons, with one icon missing from the top center.
   
**④** = Consolidate First List  
**⑤** = Initialize  
**⑥** = Clear Tried List  
**⑦** = Add to Try List  
**⑧** = Exit  
 Your Selection?

Initialize will populate the first two arrays with values but clear the last one.

Copy from first to third must allow a user to select the starting and ending elements to move. Those are copied to the end of the list (either 2 or 3 depending)

Watch a run through:


 A decorative border made of 3D-style cake icons, with one icon missing from the top center.
   
 \*\*\* Array Copying Menu \*\*\*
   
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**⑤** = Initialize  
**⑥** = Clear Tried List  
**⑦** = Add to Try List  
**⑧** = Exit  
 Your Selection?

1

Interested-----Tried-----Not going there!----

-			
0	{EMPTY}	{EMPTY}	{EMPTY}
1	{EMPTY}	{EMPTY}	{EMPTY}
2	{EMPTY}	{EMPTY}	{EMPTY}
3	{EMPTY}	{EMPTY}	{EMPTY}
4	{EMPTY}	{EMPTY}	{EMPTY}
5	{EMPTY}	{EMPTY}	{EMPTY}
6	{EMPTY}	{EMPTY}	{EMPTY}
7	{EMPTY}	{EMPTY}	{EMPTY}
8	{EMPTY}	{EMPTY}	{EMPTY}
9	{EMPTY}	{EMPTY}	{EMPTY}
10	{EMPTY}	{EMPTY}	{EMPTY}

11 {EMPTY} {EMPTY} {EMPTY}  
12 {EMPTY} {EMPTY} {EMPTY}  
13 {EMPTY} {EMPTY} {EMPTY}  
14 {EMPTY} {EMPTY} {EMPTY}

\*\*\* Array Copying Menu \*\*\*

- ① = Display Lists
- ② = Move from First List to 2nd
- ③ = Move from First List to 3rd
- ④ = Consolidate First List
- ⑤ = Initialize
- ⑥ = Clear Tried List
- ⑦ = Add to Try List
- ⑧ = Exit

Your Selection?

5

\*\*\* Array Copying Menu \*\*\*

- ① = Display Lists
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- ⑤ = Initialize
- ⑥ = Clear Tried List
- ⑦ = Add to Try List
- ⑧ = Exit

Your Selection?

1

Interested-----Tried-----Not going there!-----

0	Fish Eyes	Rice and Beans	{EMPTY}
1	Frog Legs	Liver	{EMPTY}
2	Alligator	Paella	{EMPTY}
3	Sushi	Chicken	{EMPTY}
4	Buffalo	Pizza	{EMPTY}
5	Cow Tongue	{EMPTY}	{EMPTY}
6	Shark	{EMPTY}	{EMPTY}
7	Scrapple	{EMPTY}	{EMPTY}

8	Cheese Steak	{EMPTY}	{EMPTY}
9	Seaweed	{EMPTY}	{EMPTY}
10	Vegetarian Korma	{EMPTY}	{EMPTY}
11	Deep Fried Oreo	{EMPTY}	{EMPTY}
12	ChickBacRanch Pizza	{EMPTY}	{EMPTY}
13	Cavier	{EMPTY}	{EMPTY}
14	{EMPTY}	{EMPTY}	{EMPTY}

\*\*\* Array Copying Menu \*\*\*

- ① = Display Lists
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- ⑦ = Add to Try List
- ⑧ = Exit

Your Selection?

2

Starting with which item?

1

Ending with which item?

5

Copying...

DONE

\*\*\* Array Copying Menu \*\*\*

- ① = Display Lists
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- ⑤ = Initialize
- ⑥ = Clear Tried List
- ⑦ = Add to Try List
- ⑧ = Exit

Your Selection?

1

Interested-----Tried-----Not going there!

-			
0	Fish Eyes	Rice and Beans	{ EMPTY }
1	{ EMPTY }	Liver	{ EMPTY }
2	{ EMPTY }	Paella	{ EMPTY }
3	{ EMPTY }	Chicken	{ EMPTY }
4	{ EMPTY }	Pizza	{ EMPTY }
5	{ EMPTY }	Frog Legs	{ EMPTY }
6	Shark	Alligator	{ EMPTY }
7	Scrapple	Sushi	{ EMPTY }
8	Cheese Steak	Buffalo	{ EMPTY }
9	Seaweed	Cow Tongue	{ EMPTY }
10	Vegetarian Korma	{ EMPTY }	{ EMPTY }
11	Deep Fried Oreo	{ EMPTY }	{ EMPTY }
12	ChickBacRanch Pizza	{ EMPTY }	{ EMPTY }
13	Cavier	{ EMPTY }	{ EMPTY }
14	{ EMPTY }	{ EMPTY }	{ EMPTY }

\*\*\* Array Copying Menu \*\*\*

- ① = Display Lists
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- ④ = Consolidate First List
- ⑤ = Initialize
- ⑥ = Clear Tried List
- ⑦ = Add to Try List
- ⑧ = Exit

Your Selection?

3

Starting with which item?

13

Ending with which item?

13

Copying...

DONE

\*\*\* Array Copying Menu \*\*\*

- ① = Display Lists
- ② = Move from First List to 2nd

- ③ = Move from First List to 3rd  
 ④ = Consolidate First List  
 ⑤ = Initialize  
 ⑥ = Clear Tried List  
 ⑦ = Add to Try List  
 ⑧ = Exit

Your Selection?

1

Interested-----Tried-----Not going there!-----

0	Fish Eyes	Rice and Beans	Cavier
1	{EMPTY}	Liver	{EMPTY}
2	{EMPTY}	Paella	{EMPTY}
3	{EMPTY}	Chicken	{EMPTY}
4	{EMPTY}	Pizza	{EMPTY}
5	{EMPTY}	Frog Legs	{EMPTY}
6	Shark	Alligator	{EMPTY}
7	Scapple	Sushi	{EMPTY}
8	Cheese Steak	Buffalo	{EMPTY}
9	Seaweed	Cow Tongue	{EMPTY}
10	Vegetarian Korma	{EMPTY}	{EMPTY}
11	Deep Fried Oreo	{EMPTY}	{EMPTY}
12	ChickBacRanch Pizza	{EMPTY}	{EMPTY}
13	{EMPTY}	{EMPTY}	{EMPTY}
14	{EMPTY}	{EMPTY}	{EMPTY}

\*\*\* Array Copying Menu \*\*\*

- ① = Display Lists  
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 ⑤ = Initialize  
 ⑥ = Clear Tried List  
 ⑦ = Add to Try List  
 ⑧ = Exit

Your Selection?

3

Starting with which item?

6

Ending with which item?

7

Copying...

DONE

\*\*\* Array Copying Menu \*\*\*

- ① = Display Lists
- ② = Move from First List to 2nd
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- ⑤ = Initialize
- ⑥ = Clear Tried List
- ⑦ = Add to Try List
- ⑧ = Exit

Your Selection?

1

Interested-----Tried-----Not going there!-----

0	Fish Eyes	Rice and Beans	Cavier
1	{EMPTY}	Liver	Shark
2	{EMPTY}	Paella	Scrapple
3	{EMPTY}	Chicken	{EMPTY}
4	{EMPTY}	Pizza	{EMPTY}
5	{EMPTY}	Frog Legs	{EMPTY}
6	{EMPTY}	Alligator	{EMPTY}
7	{EMPTY}	Sushi	{EMPTY}
8	Cheese Steak	Buffalo	{EMPTY}
9	Seaweed	Cow Tongue	{EMPTY}
10	Vegetarian Korma	{EMPTY}	{EMPTY}
11	Deep Fried Oreo	{EMPTY}	{EMPTY}
12	ChickBacRanch Pizza	{EMPTY}	{EMPTY}
13	{EMPTY}	{EMPTY}	{EMPTY}
14	{EMPTY}	{EMPTY}	{EMPTY}

\*\*\* Array Copying Menu \*\*\*

- ① = Display Lists
- ② = Move from First List to 2nd
- ③ = Move from First List to 3rd
- ④ = Consolidate First List

4 = Initialize  
5 = Clear Tried List  
6 = Add to Try List  
7 = Exit  
Your Selection?

4

\*\*\* Array Copying Menu \*\*\*

1 = Display Lists  
2 = Move from First List to 2nd  
3 = Move from First List to 3rd  
4 = Consolidate First List  
5 = Initialize  
6 = Clear Tried List  
7 = Add to Try List  
8 = Exit

Your Selection?

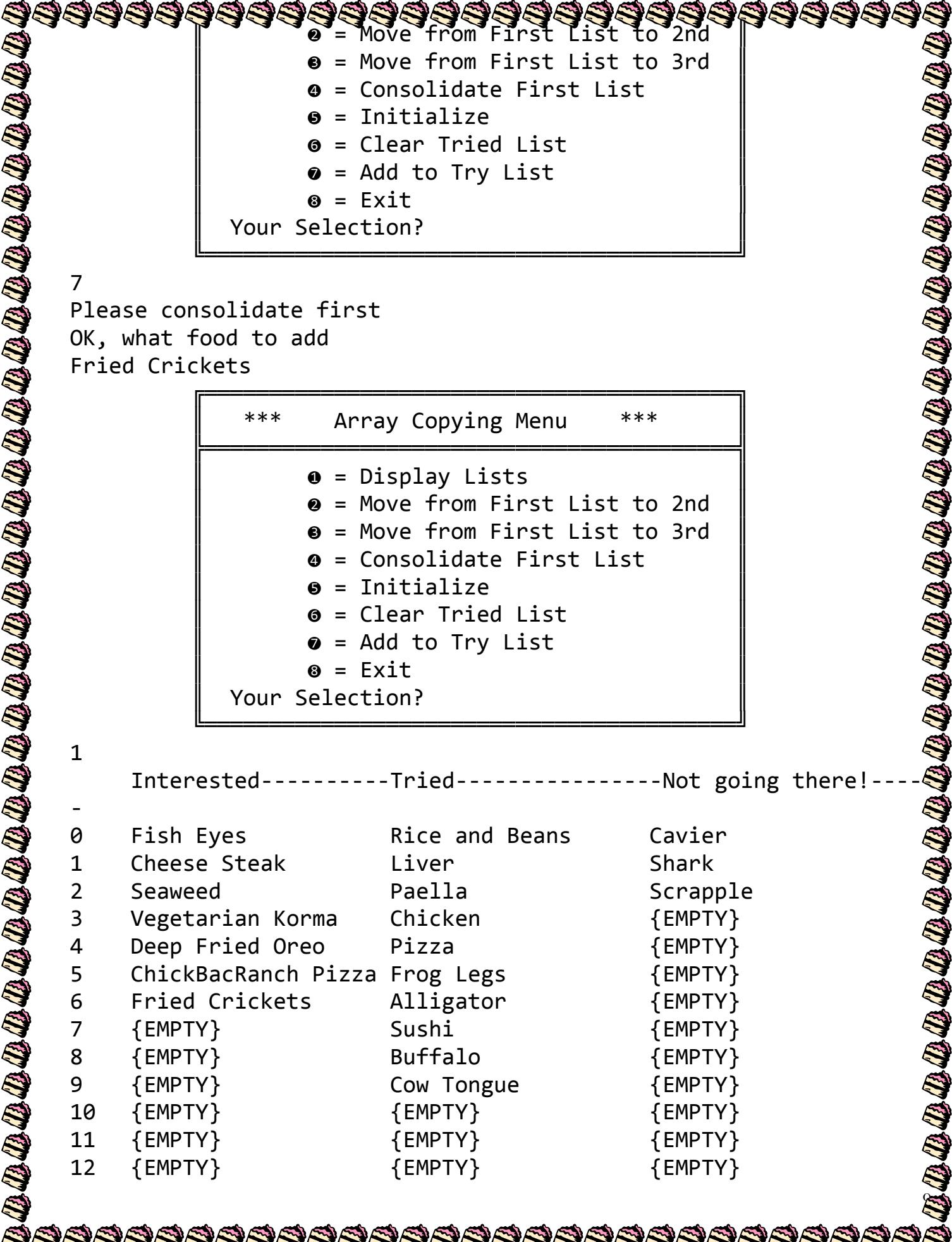
1 Interested-----Tried-----Not going there!-----

-

0	Fish Eyes	Rice and Beans	Cavier
1	Cheese Steak	Liver	Shark
2	Seaweed	Paella	Scapple
3	Vegetarian Korma	Chicken	{EMPTY}
4	Deep Fried Oreo	Pizza	{EMPTY}
5	ChickBacRanch Pizza	Frog Legs	{EMPTY}
6	{EMPTY}	Alligator	{EMPTY}
7	{EMPTY}	Sushi	{EMPTY}
8	{EMPTY}	Buffalo	{EMPTY}
9	{EMPTY}	Cow Tongue	{EMPTY}
10	{EMPTY}	{EMPTY}	{EMPTY}
11	{EMPTY}	{EMPTY}	{EMPTY}
12	{EMPTY}	{EMPTY}	{EMPTY}
13	{EMPTY}	{EMPTY}	{EMPTY}
14	{EMPTY}	{EMPTY}	{EMPTY}

\*\*\* Array Copying Menu \*\*\*

1 = Display Lists

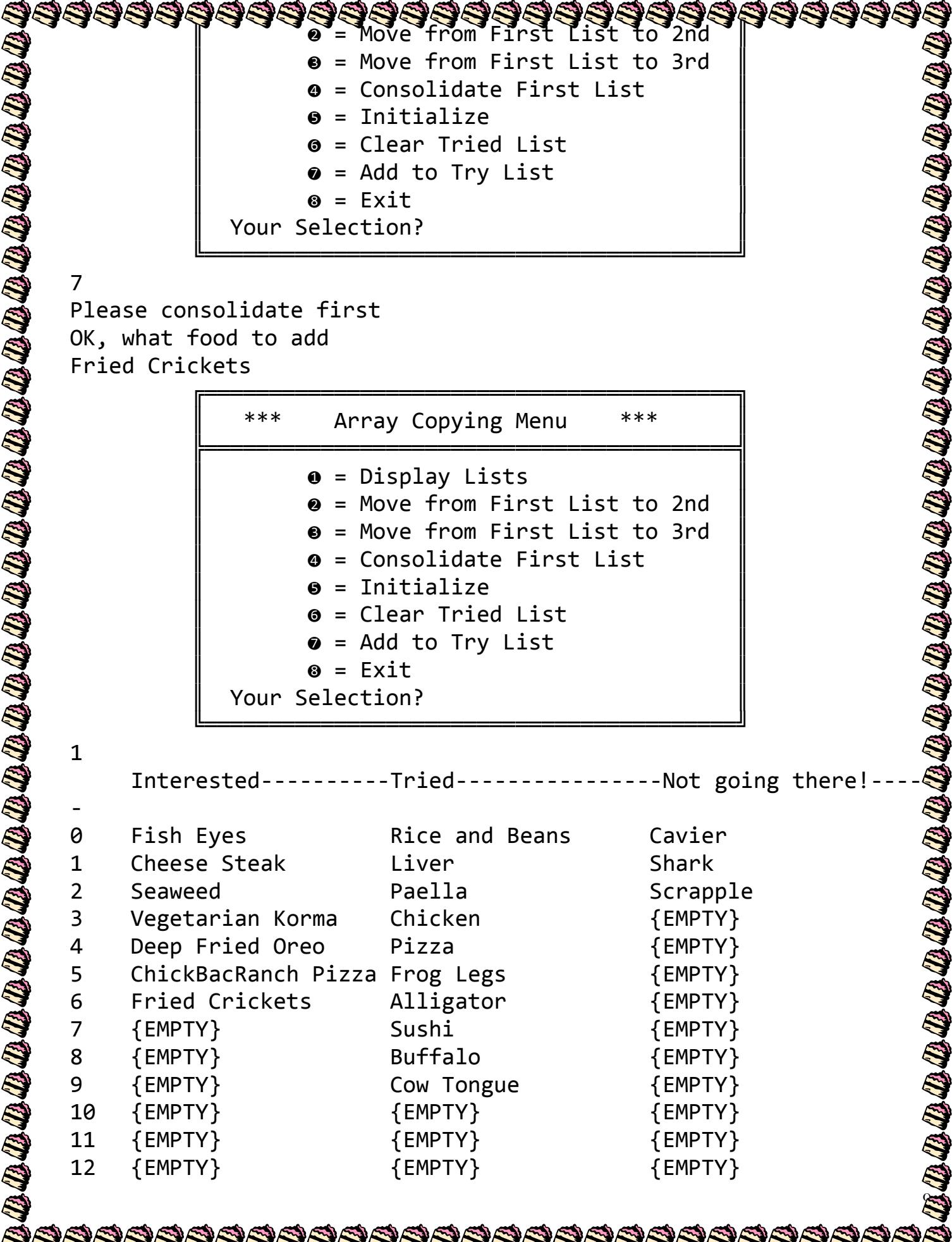
  
② = Move from First List to 2nd  
③ = Move from First List to 3rd  
④ = Consolidate First List  
⑤ = Initialize  
⑥ = Clear Tried List  
⑦ = Add to Try List  
⑧ = Exit  
Your Selection?

7

Please consolidate first

OK, what food to add

Fried Crickets

  
\*\*\* Array Copying Menu \*\*\*  
  
① = Display Lists  
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⑤ = Initialize  
⑥ = Clear Tried List  
⑦ = Add to Try List  
⑧ = Exit  
Your Selection?

1

Interested-----Tried-----Not going there!-----

0	Fish Eyes	Rice and Beans	Cavier
1	Cheese Steak	Liver	Shark
2	Seaweed	Paella	Scrapple
3	Vegetarian Korma	Chicken	{EMPTY}
4	Deep Fried Oreo	Pizza	{EMPTY}
5	ChickBacRanch Pizza	Frog Legs	{EMPTY}
6	Fried Crickets	Alligator	{EMPTY}
7	{EMPTY}	Sushi	{EMPTY}
8	{EMPTY}	Buffalo	{EMPTY}
9	{EMPTY}	Cow Tongue	{EMPTY}
10	{EMPTY}	{EMPTY}	{EMPTY}
11	{EMPTY}	{EMPTY}	{EMPTY}
12	{EMPTY}	{EMPTY}	{EMPTY}

13 {EMPTY}

{EMPTY}

{EMPTY}

14 {EMPTY}

{EMPTY}

{EMPTY}

\*\*\* Array Copying Menu \*\*\*

- ① = Display Lists
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Your Selection?

6

\*\*\* Array Copying Menu \*\*\*

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- ⑤ = Initialize
- ⑥ = Clear Tried List
- ⑦ = Add to Try List
- ⑧ = Exit

Your Selection?

1

Interested-----Tried-----Not going there!-----

0	Fish Eyes	{EMPTY}	Cavier
1	Cheese Steak	{EMPTY}	Shark
2	Seaweed	{EMPTY}	Scrapple
3	Vegetarian Korma	{EMPTY}	{EMPTY}
4	Deep Fried Oreo	{EMPTY}	{EMPTY}
5	ChickBacRanch Pizza	{EMPTY}	{EMPTY}
6	Fried Crickets	{EMPTY}	{EMPTY}
7	{EMPTY}	{EMPTY}	{EMPTY}
8	{EMPTY}	{EMPTY}	{EMPTY}
9	{EMPTY}	{EMPTY}	{EMPTY}

10 {EMPTY} {EMPTY} {EMPTY}  
11 {EMPTY} {EMPTY} {EMPTY}  
12 {EMPTY} {EMPTY} {EMPTY}  
13 {EMPTY} {EMPTY} {EMPTY}  
14 {EMPTY} {EMPTY} {EMPTY}

*** Array Copying Menu ***		
① = Display Lists ② = Move from First List to 2nd ③ = Move from First List to 3rd ④ = Consolidate First List ⑤ = Initialize ⑥ = Clear Tried List ⑦ = Add to Try List ⑧ = Exit	Your Selection?	

2  
Starting with which item?  
3  
Ending with which item?  
5  
Copying...  
DONE

*** Array Copying Menu ***		
① = Display Lists ② = Move from First List to 2nd ③ = Move from First List to 3rd ④ = Consolidate First List ⑤ = Initialize ⑥ = Clear Tried List ⑦ = Add to Try List ⑧ = Exit	Your Selection?	

1 Interested-----Tried-----Not going there!----  
-  
0 Fish Eyes Vegetarian Korma Cavier

1	Cheese Steak	Deep Fried Oreo	Shark
2	Seaweed	ChickBacRanch Pizza	Scrapple
3	{EMPTY}	{EMPTY}	{EMPTY}
4	{EMPTY}	{EMPTY}	{EMPTY}
5	{EMPTY}	{EMPTY}	{EMPTY}
6	Fried Crickets	{EMPTY}	{EMPTY}
7	{EMPTY}	{EMPTY}	{EMPTY}
8	{EMPTY}	{EMPTY}	{EMPTY}
9	{EMPTY}	{EMPTY}	{EMPTY}
10	{EMPTY}	{EMPTY}	{EMPTY}
11	{EMPTY}	{EMPTY}	{EMPTY}
12	{EMPTY}	{EMPTY}	{EMPTY}
13	{EMPTY}	{EMPTY}	{EMPTY}
14	{EMPTY}	{EMPTY}	{EMPTY}

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Your Selection?

7

Please consolidate first

OK, what food to add

Chix Waffles

\*\*\* Array Copying Menu \*\*\*

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- ⑤ = Initialize
- ⑥ = Clear Tried List
- ⑦ = Add to Try List
- ⑧ = Exit

Your Selection?

1

Interested-----Tried-----Not going there!----

-

0	Fish Eyes	Vegetarian Korma	Cavier
1	Cheese Steak	Deep Fried Oreo	Shark
2	Seaweed	ChickBacRanch Pizza	Scrapple
3	Chix Waffles	{EMPTY}	{EMPTY}
4	{EMPTY}	{EMPTY}	{EMPTY}
5	{EMPTY}	{EMPTY}	{EMPTY}
6	Fried Crickets	{EMPTY}	{EMPTY}
7	{EMPTY}	{EMPTY}	{EMPTY}
8	{EMPTY}	{EMPTY}	{EMPTY}
9	{EMPTY}	{EMPTY}	{EMPTY}
10	{EMPTY}	{EMPTY}	{EMPTY}
11	{EMPTY}	{EMPTY}	{EMPTY}
12	{EMPTY}	{EMPTY}	{EMPTY}
13	{EMPTY}	{EMPTY}	{EMPTY}
14	{EMPTY}	{EMPTY}	{EMPTY}

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- ⑧ = Exit

Your Selection?

4

\*\*\* Array Copying Menu \*\*\*

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- ③ = Move from First List to 3rd
- ④ = Consolidate First List
- ⑤ = Initialize

⑥ = Clear Tried List  
⑦ = Add to Try List  
⑧ = Exit  
Your Selection?

5

\*\*\* Array Copying Menu \*\*\*

- ① = Display Lists
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Your Selection?

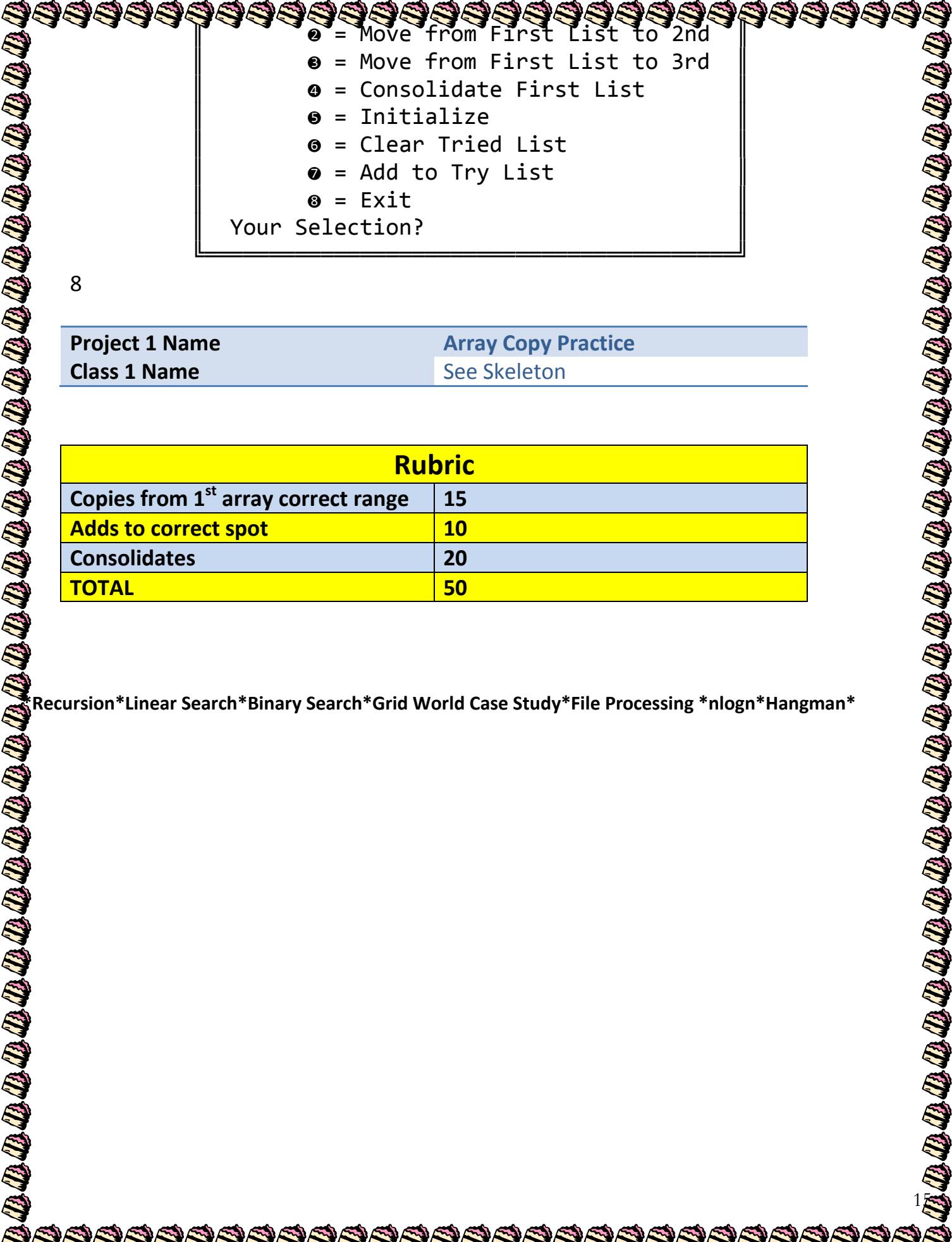
1

Interested-----Tried-----Not going there!-----

-		
0	Fish Eyes	Rice and Beans {EMPTY}
1	Frog Legs	Liver {EMPTY}
2	Alligator	Paella {EMPTY}
3	Sushi	Chicken {EMPTY}
4	Buffalo	Pizza {EMPTY}
5	Cow Tongue	{EMPTY} {EMPTY}
6	Shark	{EMPTY} {EMPTY}
7	Scrapple	{EMPTY} {EMPTY}
8	Cheese Steak	{EMPTY} {EMPTY}
9	Seaweed	{EMPTY} {EMPTY}
10	Vegetarian Korma	{EMPTY} {EMPTY}
11	Deep Fried Oreo	{EMPTY} {EMPTY}
12	ChickBacRanch Pizza	{EMPTY} {EMPTY}
13	Cavier	{EMPTY} {EMPTY}
14	{EMPTY}	{EMPTY} {EMPTY}

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① = Display Lists

  
② = Move from First List to 2nd  
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⑧ = Exit  
Your Selection?

8

Project 1 Name  
Class 1 Name

Array Copy Practice  
See Skeleton

### Rubric

Copies from 1 <sup>st</sup> array correct range	15
Adds to correct spot	10
Consolidates	20
<b>TOTAL</b>	<b>50</b>

Recursion\*Linear Search\*Binary Search\*Grid World Case Study\*File Processing \*nlogn\*Hangman\*