

Group Collaboration Summary:

Week 3:

Group: PST Evenings and Weekends

Members:

Aaron Samuel Bellamy (bellamaa@oregonstate.edu)

Andrew M. Calhoun (calhouna@oregonstate.edu)

Evan Lyon (lynone@oregonstate.edu)

Ryan Marsh (marshd@oregonstate.edu)

Binh Vu (vub@oregonstate.edu)

Recording Secretary: Andrew M. Calhoun

Assigned Worksheet(s): 17 – Evan

18 – Aaron

19 – Ryan

20 - Binh

As Andrew was busy with outside work this week and did not submit or claim a worksheet, he volunteered to be the recording secretary for Week 3.

This week we had lively discussions on Canvas regarding stylistic and logical decisions in programming. One thing that Andrew noticed Ryan doing was adding the array variable name after the free/delete array command and setting it to zero:

```
Example: free(randomArr);
```

```
randomArr = 0;
```

While it was agreed to be a largely personal or stylistic choice, it helps ensure that the array was read as null rather than potentially be left free floating. We also discussed placeholder and temporary nodes in linked lists, as well as proper pointer formatting.

Bihn posed the question:

Ryan or anyone else,

I was updating my worksheet 20, and noticed something about dequeAddBack().

I'll just use Ryan's code as an example:

```
if (d->size >= d->capacity) _dequeSetcapacity(d, 2* d->capacity);
```

```
d->data[(d->size + d->start) % d->capacity] = newValue;
```

```
d->size++;
```

So let's say:

capacity = 7

size = 0

start = 1

After adding the first item, it becomes:

capacity = 7

size = 1

start = 0

So adding the second and third item results in:

capacity = 7

size = 3

start = 5

So far so good right? Start = 5 because $(start + capacity) - size$ if $start == 0$

What if I decided to add to the back this time? Doing so would need to use the offset, which is $(size + start) - capacity$ if offset is higher.

So adding the fourth item to the back results in:

capacity = 7

size = 4

start = 1

Start = 1 because of $(3 + 5) - 7$. But index 1 has already been used. Am I misunderstanding something here?

Ryan's response:

In that case,

capacity = 7

size = 4

start = 5.

Start isn't altered in the `dequeAddBack()` function. Only size is being changed.

Binh replied:

Right start isn't being altered. meant the offset value. The

capacity = 7

size = 3

start = 5

was from adding the third item. But when I want to add the fourth item using `dequeAddBack()` instead of adding to the front, the offset becomes $(5 + 3) - 7 = 1$. Unless you increment size before doing the offset, size would still be 3, but we only increment size after adding an item.

Otherwise, we posted our solutions to the file share and google docs and made edits as we went, found errors, or improvements.

This concludes the meeting notes for Group 3, Week 3.