

W13-assignment

- Use pointer to pointer to implement memory allocation
- Use bitwise operation to manage your memory
- Two types of data (big and small)
- For big data, find two continuous spaces for that data
 - If no continuous spaces, response not found
- Only one “malloc” is allowed

```
tQueue* createQueue(void){  
    tQueue *queue;  
    queue=(tQueue *) malloc (sizeof(tQueue));  
}
```

```

Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
1
Enter id:10
byte_buf_mask: 0 0 0 0 0 0 1
queue content: 10(1)

Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
1
Enter id:11
byte_buf_mask: 0 0 0 0 0 0 1 1
queue content: 10(1) 11(1)

Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
1
Enter id:12
byte_buf_mask: 0 0 0 0 0 1 1 1
queue content: 10(1) 11(1) 12(1)

Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
2
Enter id:21
byte_buf_mask: 0 0 0 1 1 1 1 1
queue content: 10(1) 11(1) 12(1) 21(2)

Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
2
Enter id:22
byte_buf_mask: 0 1 1 1 1 1 1 1
queue content: 10(1) 11(1) 12(1) 21(2) 22(2)

Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
2
Enter id:23
Enqueue False!!!
Cannot enter to the queue
byte_buf_mask: 0 1 1 1 1 1 1 1
queue content: 10(1) 11(1) 12(1) 21(2) 22(2) 23(2)

```

```
Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
2
Enter id:23
Enqueue False!!!
Cannot enter to the queue
byte_buf_mask: 0 1 1 1 1 1 0 1
queue content: 10(1) 12(1) 21(2) 22(2)
```

```
Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
2
Enter id:23
byte_buf_mask: 0 1 1 1 1 1 1 1
queue content: 10(1) 21(2) 22(2) 23(2)
```

```
Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
21
No such operation
queue content: 10(1) 21(2) 22(2) 23(2)
```

Which type you are going to operate?

```
Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
1
Enter id:11
byte_buf_mask: 1 1 1 1 1 1 1 1
queue content: 22(2) 23(2) 24(2) 10(1) 11(1)
```

```
Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
1
Enter id:12
Enqueue False!!!
Cannot enter to the queue
byte_buf_mask: 1 1 1 1 1 1 1 1
queue content: 22(2) 23(2) 24(2) 10(1) 11(1)
```

```
Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
4
Enter an ID to remove 23
byte_buf_mask: 1 0 0 1 0 0 1 1
queue content: 24(2) 10(1) 11(1)
```

```
Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
2
Enter id:21
byte_buf_mask: 0 0 0 0 0 1 1 1
queue content: 19(1) 21(2)
```

```
Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
2
Enter id:22
    byte_buf_mask: 0 0 0 1 1 1 1
    queue content: 19(1) 21(2) 22(2)
```

```
Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
4
Enter an ID to remove 22
byte_buf_mask: 0 1 1 0 0 0 0 0
queue content: 23(2)
```

```
Which type you are going to operate?
1. Add a type 1 (small) item
2. Add a type 2 (big) item
3. Remove a type 1 item with a specific Id
4. Remove a type 2 item with a specific Id
4
Enter an ID to remove 23
byte_buf_mask: 0 0 0 0 0 0 0 0
queue content:
```