Welcome to the MBTA

Have a CharlieCard?
Tap card to target.

To purchase new CharlieTicket (value, tickets, and passes)
Press Here

To add value or check ticket balance, insert ticket below.
You have selected:
Purchase CharlieTicket

Please Make Your Selection

What ticket would you like to purchase?

Bus & Subway Tickets
Commuter Rail
Passes
You Have Selected:
Bus & Subway Tickets

Please Select Your Fare

- Adult
- Student
- Senior
- Persons with Disabilities

Go Back
Cancel
You Have Selected:
SV Adult

Please Select Payment Type

SV Adult
Amount To Pay: $ 4.00

Credit Card
Debit Card

Go Back
Cancel
You Have Selected:  
SV Adult

Number Of Tickets: 1

Amount To Pay: $4.00

Payment Method: Credit Card

Confirm

Go Back  Cancel
problem set 5
<table>
<thead>
<tr>
<th>Offset</th>
<th>Type</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>WORD</td>
<td>bfType</td>
</tr>
<tr>
<td>2</td>
<td>DWORD</td>
<td>bfSize</td>
</tr>
<tr>
<td>6</td>
<td>WORD</td>
<td>bfReserved1</td>
</tr>
<tr>
<td>8</td>
<td>WORD</td>
<td>bfReserved2</td>
</tr>
<tr>
<td>10</td>
<td>DWORD</td>
<td>bfOffBits</td>
</tr>
<tr>
<td>14</td>
<td>DWORD</td>
<td>biSize</td>
</tr>
<tr>
<td>18</td>
<td>LONG</td>
<td>biWidth</td>
</tr>
<tr>
<td>22</td>
<td>LONG</td>
<td>biHeight</td>
</tr>
<tr>
<td>26</td>
<td>WORD</td>
<td>biPlanes</td>
</tr>
<tr>
<td>28</td>
<td>WORD</td>
<td>biBitCount</td>
</tr>
<tr>
<td>30</td>
<td>DWORD</td>
<td>biCompression</td>
</tr>
<tr>
<td>34</td>
<td>DWORD</td>
<td>biSizeImage</td>
</tr>
<tr>
<td>38</td>
<td>LONG</td>
<td>biXPelsPerMeter</td>
</tr>
<tr>
<td>42</td>
<td>LONG</td>
<td>biYPelsPerMeter</td>
</tr>
<tr>
<td>46</td>
<td>DWORD</td>
<td>biClrUsed</td>
</tr>
<tr>
<td>50</td>
<td>DWORD</td>
<td>biClrImportant</td>
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<tr>
<td>54</td>
<td>BYTE</td>
<td>rgbtBlue</td>
</tr>
<tr>
<td>55</td>
<td>BYTE</td>
<td>rgbtGreen</td>
</tr>
<tr>
<td>56</td>
<td>BYTE</td>
<td>rgbtRed</td>
</tr>
<tr>
<td>57</td>
<td>BYTE</td>
<td>rgbtBlue</td>
</tr>
<tr>
<td>58</td>
<td>BYTE</td>
<td>rgbtGreen</td>
</tr>
<tr>
<td>59</td>
<td>BYTE</td>
<td>rgbtRed</td>
</tr>
</tbody>
</table>

...
Hacker Edition
office hours
quiz 0
Invalid write of size 4
  at 0x804840F: f (memory.c:23)
  by 0x8048421: main (memory.c:30)

40 bytes in 1 blocks are definitely lost in loss record 1 of 1
  at 0x4025BDC: malloc (vg_replace_malloc.c:195)
  by 0x8048405: f (memory.c:22)
  by 0x8048421: main (memory.c:30)
typedef struct node {
  int n;
  struct node *next;
} node;
insert at tail
insert at head
insert in middle
insert in middle

```
<table>
<thead>
<tr>
<th>first</th>
<th>9</th>
<th>17</th>
<th>22</th>
<th>29</th>
<th>34</th>
</tr>
</thead>
</table>
```

predptr

newptr

http://cs.calvin.edu/books/c++/ds/1e/
insert in middle
remove tail
remove head
remove in middle
to be continued...