CECS 524 Unit 1 Assignment 1

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1. Write, in the programming language of your choice, an interpreter for Brainfu*k. It is very simple, on the order of a late first semester of programming assignment. Did mine in Java, about 60 lines of code. Run it with this input below - what is the output?

Code:

```
package Unit1;
import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;
public class BrainF {
       public static void main(String[] args) throws IOException
               byte b[]=new byte[30000];
              int dp=0;
              BufferedReader rd = new BufferedReader(
              new InputStreamReader(System.in));
          String input = rd.readLine();
          int p=0;
      for(int i=0;i<input.length();i++)</pre>
                      switch(input.charAt(i))
                      case '>':
                             dp++;
                              break;
                      case '<':
                             dp--;
```

```
break;
              case '+':
                       b[dp]++;
                       break;
              case '-':
                      b[dp]--;
                       break;
              case '.':
                      System.out.print((char)b[dp]);
                       break;
              case ',':
                       b[dp]=(byte)(rd.readLine().charAt(0));
                       break;
              case '[':
                      if (b[dp] == 0)
{
  i++;
  while (p>0 | | input.charAt(i) != ']')
     if (input.charAt(i) == '[')
       p++;
     else if (input.charAt(i) == ']')
       p--;
     i ++;
  }
}
                       break;
              case ']':
                      if (b[dp] != 0)
{
  while (p > 0 | | input.charAt(i) != '[')
     if (input.charAt(i) == ']')
       p ++;
     else if (input.charAt(i) == '[')
       p --;
     i--;
```

```
}
i--;
}
```

Output:

```
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2*import java.io.BufferedReader;
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✓ Θ<sub>▶</sub> BrainF
                                                                                                                                                                                                                        • s main(String[]) : void
                                                                      public class BrainF {
    public static void main(String[] args) throws IOException
    {
                                                                                  byte b[]=new byte[30000];
int dp=0;
BufferedReader rd = new BufferedReader(
    new InputStreamReader(System.in));
String input = rd.readLine();
// System.out.println(input);
String res="";
int p=0;
for(int i=0;i<input.length();i++){</pre>
                                                                                          switch(input.charAt(i))
                                                                                           case '>':
dp++;
break;
                                                                                          case '<':
    dp--;
    break;</pre>

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