```python
1   """
2   CSE212
3   (c) BYU-Idaho
4   03-Teach - Problem 2 - Solution
5
6   It is a violation of BYU-Idaho Honor Code to post or share this code with others or
7   to post it online.  Storage into a personal and private repository (e.g. private
8   GitHub repository, unshared Google Drive folder) is acceptable.
9   """
10
11  def check_braces(line):
12      """
13      This function will check a line of code an ensure that the braces (including
        parentheses,
14      square brackets, and curly brackets) are properly used by matching and balancing the
15      open and closed symbols.  All other characters in the line of code will be ignored.
16      A stack is used to remember which open braces where seen previously.  When a close
17      brace is seen then the stack is checked to make sure there is a matching open
        brace.
18      If an error is found, the function exits.
19      """
20      stack = []
21      for item in line:    # Look at each character in the line of code received
22          if item == '(' or item == '[' or item == '{':  # Check for open braces
23              stack.append(item)
24          elif item == ')':                            # Check for close braces
25              if len(stack) == 0 or stack.pop() != '(':
26                  return False
27          elif item == ']':
28              if len(stack) == 0 or stack.pop() != '[':
29                  return False
30          elif item == '}':
31              if len(stack) == 0 or stack.pop() != '{':
32                  return False
33      # If there were any open braces not yet closed then we have an error.
34      return len(stack) == 0
35
36
37  # Good (passes on line 34)
38  print(check_braces("(a == 3 or (b == 5 and c == 6))"))
39
40  # Bad ..wrong opening square bracket (fails on line 29)
41  #                             \/
42  print(check_braces("(students]i].grade > 80 and students[i.grade < 90)"))
43
44  # Bad .... missing closing ')' here ------- (fails on line 34)
45  #                                      \/
46  print(check_braces("(robot[id + 1].execute(.pass() or (not robot[id * (2 + i)].alive
    and stormy) or (robot[id - 1].alive and lava_flowing))"))
```