

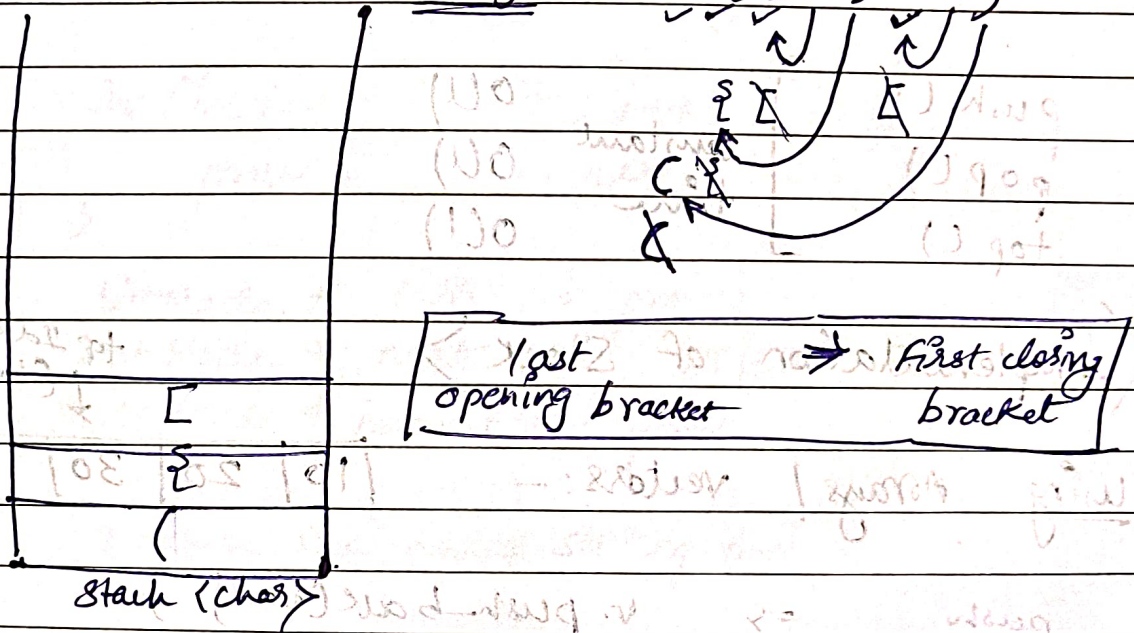
Valid Parentheses (LC-20)

() {} []

- ① open brackets must be closed by same type of brackets.
- ② open brackets must be closed by bracket in correct order
- ③ every close bracket has corresponding open bracket of same type.

for eg:-

{ { [] } [] }



Pseudocode

bool isValid (str) {

Stack (char) st;

for (i=0 to n) { // opening

if (str[i] == opening)

st.push(ch);

else // closing char

if (str[i] match with st.top())

st.pop();

else

return false;

open → closing } }

return st.size() == 0;

}

#code :-

bool isValid (string str) {

stack<char> st;

for (int i=0; i < str.size(); i++) {

if (str[i] == '(' ||

str[i] == '{' ||

str[i] == '[') {

st.push(str[i]);

else {

if (st.size() == 0) { return false; }

if ((st.top() == '(' && str[i] == ')') ||

(st.top() == '{' && str[i] == '}') ||

(st.top() == '[' && str[i] == ']')) {

st.pop();

} else { return false; }

}

return st.size() == 0;

}