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Assignment: HW5.6

Replaces a character of a string at a given position.

@param str the string where the replacement takes place

@param position the position of the character to be replaced

@param replacement the replacement string

@return str with the character at the position changed to

the replacement string, or the original string

if position was not valid.

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// Q1

double read\_double(string prompt){

cout << prompt << ": ";

double value;

cin >> value;

return value;

}

int main(){

double price - read\_double("First item");

price = price + read\_double("Next item");

double rate = read\_doub1e("Tax rate in percent");

double tax = price \* rate / 100;

cout << "Amount due: " << (price + tax) << endl;

}

// Q2

string replace\_at(string str, int position, string replacement)

{

if (position < str.length()) {

string firstHalf = str.substr(0, position);

string secondHalf = str.substr(position + 1, str.length() - position - 1);

string newWord = firstHalf + replacement + secondHalf;

return newWord;

}

else {

return str;

}

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TESTING

string a = excellent

replace\_at(excellent, 5, p)

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}

// Q3

int find\_occurrence(string str, string ch, int n)

{

int currCount = 0;

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

if (str.substr(i, 1) == ch) {

currCount += 1;

if (currCount == n) {

return i;

}

}

}

return -1;

}

// Q4

string smart\_quotes(string str)

{

string result = str;

string left\_quote = "“";

string right\_quote = "”";

int num\_quotes = 0;

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

if (str.substr(i, 1) == "\"") {

num\_quotes += 1;

}

}

if (num\_quotes % 2 == 1) {

num\_quotes -= 1;

}

for (int i = 1; i <= num\_quotes; i++) {

int pos = find\_occurrence(result ,"\"", 1);

if (i % 2 == 1) {

result = replace\_at(result, pos, left\_quote);

}

else {

result = replace\_at(result, pos, right\_quote);

}

}

return result;

}