1st

**for** (**auto** i : oceans) {

cout << i << endl;

}

2nd

oceans.push\_back("Pacific");

oceans.push\_back("Atlantic");

oceans.push\_back("Indian");

oceans.push\_back("Arctic");

oceans.push\_back("Southern");

oceans.push\_back("Place Holder");

oceans.at(5) = "Delete";

oceans.pop\_back();

3rd

reverse.push\_back(argv[3]);

reverse.push\_back(argv[2]);

reverse.push\_back(argv[1]);

reverse.erase(reverse.begin());

reverse.erase(reverse.begin());

reverse.erase(reverse.begin());

4th

nums[0][0] = a;

nums[0][1] = b;

nums[0][2] = a + b;

nums[1][0] = c;

nums[1][1] = d;

nums[1][2] = c + d;

nums[2][0] = a + c;

nums[2][1] = b + d;

nums[2][2] = ((a+b) + (c+d) + (a+c) + (b+d)); *//or 2(a+b+c+d)*

*5th*

**for** (**auto** a : numList) {

total += a;

avg = total / numList.size();

}

……………………………………………………………….

1st (2

**if** (\*p1 > \*p2) {

cout << "The larger number is " << \*p1 << endl;

}

**else** **if** (\*p1 < \*p2) {

cout << "The larger number is " << \*p2 << endl;

}

**else** {

cout << "Neither number is larger" << endl;

}

2nd

p1 = &a;

p2 = &b;

cout << "The sum is ";

……………………………………………………………

1st (3

**char** first = my\_string.at(0);

**char** last = my\_string.at(my\_string.length()-1);

cout << first << " is the first character and " << last << " is the last character" << endl;

2nd

**int** len = my\_string.length();

**for** (**int** i = 1; i < len \* len + 1; i++) {

**if** (i % len == 0) {

cout << my\_string << endl;

}

**else** {

cout << my\_string;

}

}

3rd

**for** (**char** ch : original) {

**if** (isupper(ch)) {

modified += 'u';

}

**else** **if** (islower(ch)) {

modified += 'l';

}

**else** {

modified += '-';

}

}

cout << original << endl;

cout << modified << endl;

4th

**int** mid = my\_string.length() / 2;

**for** (**int** i = 0; i < mid; i++) {

cout << my\_string.at(i);

}

cout << endl;

**for** (**int** j = mid; j < my\_string.length(); j++) {

cout << my\_string.at(j);

}

cout << endl;

5th

**int** mid = my\_string.length() / 2;

**for** (**int** i = 0; i < mid; i++) {

cout << my\_string.at(i);

}

cout << endl;

**for** (**int** j = mid; j < my\_string.length(); j++) {

cout << my\_string.at(j);

}

cout << endl;

6th

**for** (**int** i = 0; i < my\_string.length(); i++) {

**if** (i % 2 == 0) {

cout << my\_string.at(i + 1);

}

**else** {

cout << my\_string.at(i - 1);

}

}

4th week

1st

**try** {

ifstream file;

string read;

**int** lines = 0;

**int** chars = 0;

file.open(path);

**if** (!file) {

**throw** runtime\_error("File failed to open.");

}

**while** (getline(file, read)) {

lines++;

chars += read.length();

}

file.close();

cout << lines << " line(s)" << endl;

cout << chars << " character(s)";

}

**catch** (exception& e) {

cerr << e.what() << endl;

}

2nd

vector<string> data;

**try** {

ifstream file;

string read;

file.open(path);

**if** (!file) {

**throw** runtime\_error("File failed to open.");

}

**while** (getline(file, read)) {

stringstream **ss**(read);

**while** (getline(ss, read, ',')) {

data.push\_back(read);

}

}

file.close();

}

**catch** (exception& e) {

cerr << e.what() << endl;

}

**int** col1 = 0;

**int** col2 = 0;

**int** col3 = 0;

**int** col4 = 0;

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

**if** (i == 0 || i == 4 | i == 8) {

col1 += stoi(data.at(i));

}

**if** (i == 1 || i == 5 | i == 9) {

col2 += stoi(data.at(i));

}

**if** (i == 2 || i == 6 | i == 10) {

col3 += stoi(data.at(i));

}

**if** (i == 3 || i == 7 | i == 11) {

col4 += stoi(data.at(i));

}

}

cout << col1 / 3 << " ";

cout << col2 / 3 << " ";

cout << col3 / 3 << " ";

cout << col4 / 3;

3rd

vector<string> data;

**try** {

ifstream file;

string read;

file.open(path);

**if** (!file) {

**throw** runtime\_error("File failed to open.");

}

**while** (getline(file, read)) {

stringstream **ss**(read);

**while** (getline(ss, read)) {

data.push\_back(read);

}

}

file.close();

}

**catch** (exception& e) {

cerr << e.what() << endl;

}

**for** (**int** i = data.size() - 1; i >= 0; i--) {

cout << data.at(i) << endl;

}

4th

vector<string> data;

**try** {

ifstream file;

string read;

file.open(path);

**if** (!file) {

**throw** runtime\_error("File failed to open.");

}

**while** (getline(file, read)) {

stringstream **ss**(read);

**while** (getline(ss, read, '\t')) {

data.push\_back(read);

}

}

file.close();

}

**catch** (exception& e) {

cerr << e.what() << endl;

}

**int** max = 0;

string person;

**for** (**int** i = 1; i < data.size(); i+=3) {

**if** (stoi(data.at(i)) > max) {

max = stoi(data.at(i));

person = data.at(i - 1);

}

}

cout << "The oldest person is " << person << ".";

5th

vector<string> data;

**try** {

ifstream file;

string read;

file.open(path);

**if** (!file) {

**throw** runtime\_error("File failed to open.");

}

**while** (getline(file, read)) {

stringstream **ss**(read);

**while** (getline(ss, read, ',')) {

data.push\_back(read);

}

}

file.close();

}

**catch** (exception& e) {

cerr << e.what() << endl;

}

string cities;

cout << "The following cities are in the Southern Hemisphere: ";

**for** (**int** i = 6; i < data.size(); i+=4) {

**if** (stoi(data.at(i)) < 0) {

cities += (data.at(i - 2) + ", ");

}

}

cities.pop\_back();

cities.pop\_back();

cities += ".";

cout << cities;