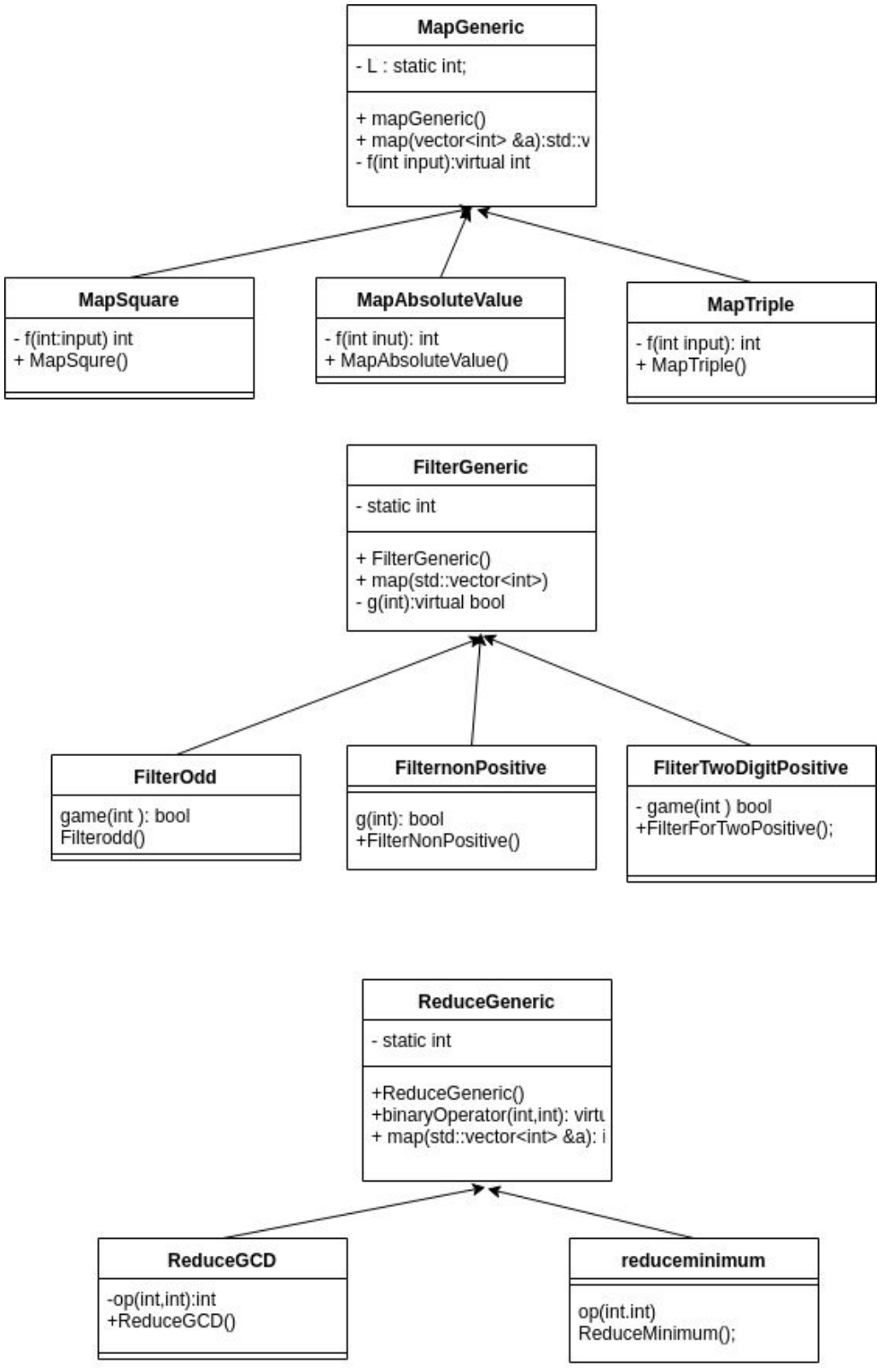
Prac 5

UML


MapGeneric
- L : static int;
+ mapGeneric()
+ map(vector<int> &a):std::v
- f(int input):virtual int
MapSquare
- f(int:input) int
+ MapSqure()
MapAbsoluteValue
- f(int inut): int
+ MapAbsoluteValue()
MapTriple
- f(int input): int
+ MapTriple()
FilterGeneric
- static int
+ FilterGeneric()
+ map(std::vector<int>)
- g(int):virtual bool
FilterOdd
game(int): bool
Filterodd()
FilternonPositive
g(int): bool
+FilterNonPositive()
FliterTwoDigitPositive
- game(int) bool
+FilterForTwoPositive();
ReduceGeneric
- static int
+ReduceGeneric()
+binaryOperator(int,int): virtu
+ map(std::vector<int> &a): i
ReduceGCD
-op(int,int):int
+ReduceGCD()
reduceminimum
op(int.int)
ReduceMinimum();

Description

- FilterForTwoDigitPositive
    - FilterForTwoDigitPositive::game(int test):
    - FilterForTwoDigitPositive(): default constructor
- FilterGeneric;
    - FilterGeneric::map(std::vector<int> &a)
    - FilterGeneric() default constructor
- FilterNonPositive
    - game(int test) should return true if and only if x is negative or 0.
    - FilterNonPositive() default constructor
- FilterOdd
    - game(int test) should return true if and only if x is odd.
    - FilterOdd() default constructor
- MapAbsoluteValue
    - function(int testcase) takes a vector as the input and returns the of vector after mapping.
    - MapAbsoluteValue() default constructor
- MapGeneric
    - map(std::vector<int> &a) which has a private method int f(int) that specifies the operation we want to map onto a list.
    - MapGeneric() default constructor
- MapSquare
    - unction(int test) akes a vector as the input and returns the square of vector after mapping.
    - MapSquare() default constructor
- MapTriple
    - MapTriple() takes a vector as the input and returns the triple of vector after mapping.
    - function(int test) default constructor
- ReduceGCD
    - op(int test, int test1) that takes a vector as the input and returns the biggest common value of two input integers.
    - ReduceGCD() ReduceGCD()
- ReduceGeneric
    - map(std::vector<int> &a) that takes a vector as the input and returns the result of reduce.
    - ReduceGeneric() ReduceGCD()
- ReduceMinimum
    - op(int test, int test1)
    - ReduceMinimum() ReduceGCD()

Main Function:

Take user input, and store them. Declare a bunch of objects, use them as input variables for different functions.

Test

Sample input: 90, -18, 53, -16, 73, 1238, 105, -104, -71, -179, -102, -12, -21, -145, -99, 199, 156, -1846, 463, -189
Sample output: 33 3

Sample input: -63, -100, -100, -100, 300, 15457, 834, 647, 15, -8433, -6430, -7432, 1942, -2565, -2089, -5010, -8, -1821,
Sample output: 15 -8

Sample input: -5, -24, -123, -81, 200, 157, 84, 67, -83, -60, -72, 192, -25, -20, -50, -181, -70, -15, -108, -123
Sample output: 15 15

Sample input: -36. 254. 74. -15. 85. 6854. -675. 45. 34. -6587, 654, 23, 89, 609. -43, -86, -25, 46, -97, 13
Sample output: -15, 23

Sample input: -869,3264, 2354, 57, 475, -234, -36 ,-64, -86, 213, 865, -7976, -76, 78, 79, -75, 135, 574, 74
Sample output: 57, 78