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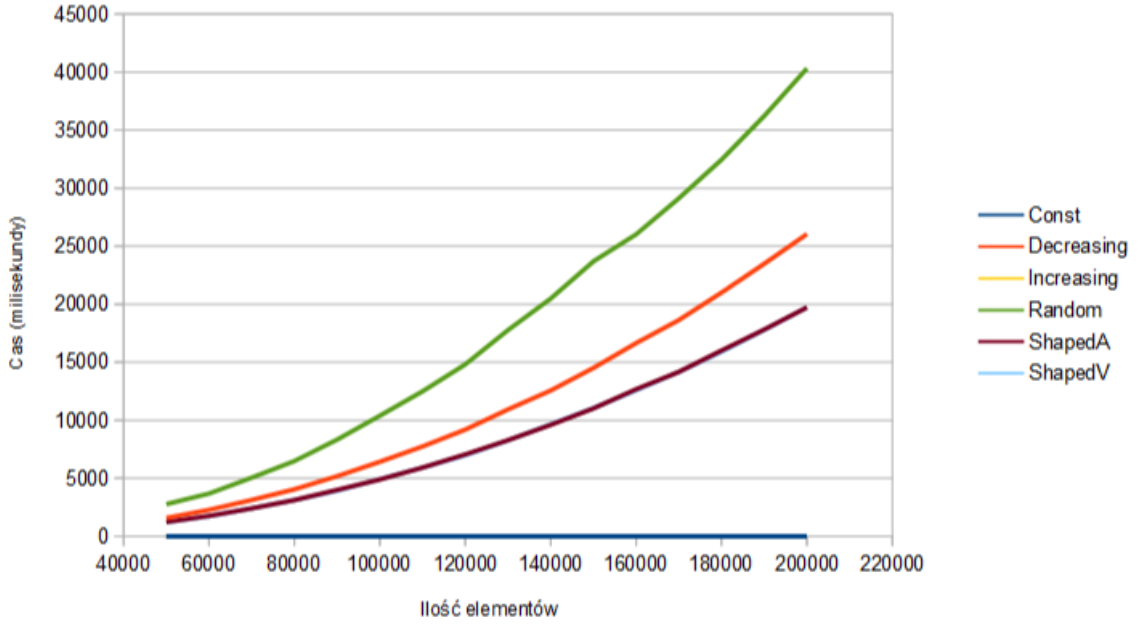
Projekt 3

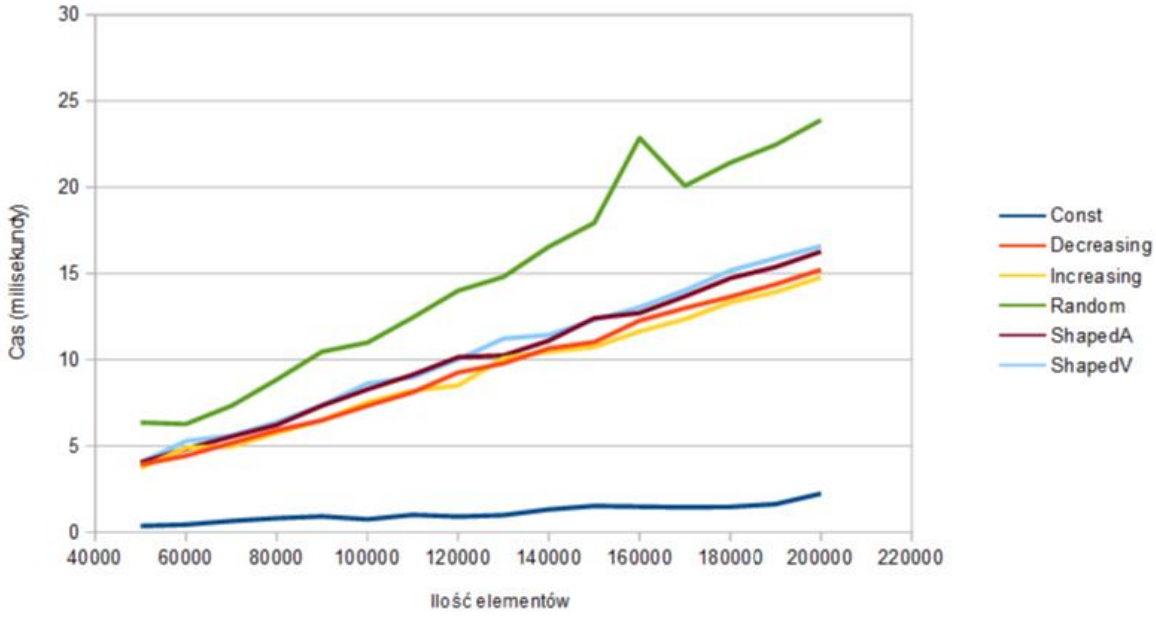
Kod tablic:

```
int[] result = new int[size];
result[0] = random.Next(minValue, maxValue);

if (type == InputType.Random) {
    for(int i = 1; i < result.Length; i++) {
        result[i] = random.Next(minValue, maxValue);
    }

} else if (type == InputType.Increasing) {
    for(int i = 1; i < result.Length; i++) {
        result[i] = result[i-1] + random.Next(0, 10);
    }

} else if (type == InputType.Decreasing) {
    for(int i = 1; i < result.Length; i++) {
        result[i] = result[i-1] - random.Next(0, 10);
    }

} else if (type == InputType.Const) {
    for (int i = 0; i < result.Length; i++) {
        result[i] = result[0];
    }

} else if (type == InputType.ShapedV) {
    int middle = size/2;
    for(int i = 1; i < middle; i++) {
        result[i] = result[i-1] - random.Next(0, 10);
    }
    for(int i = middle; i < result.Length; i++) {
        result[i] = result[i-1] + random.Next(0, 10);
    }

} else if (type == InputType.ShapedA) {
    int middle = size/2;
    for(int i = 1; i < middle; i++) {
        result[i] = result[i-1] + random.Next(0, 10);
    }
    for(int i = middle; i < result.Length; i++) {
        result[i] = result[i-1] - random.Next(0, 10);
    }

}
```

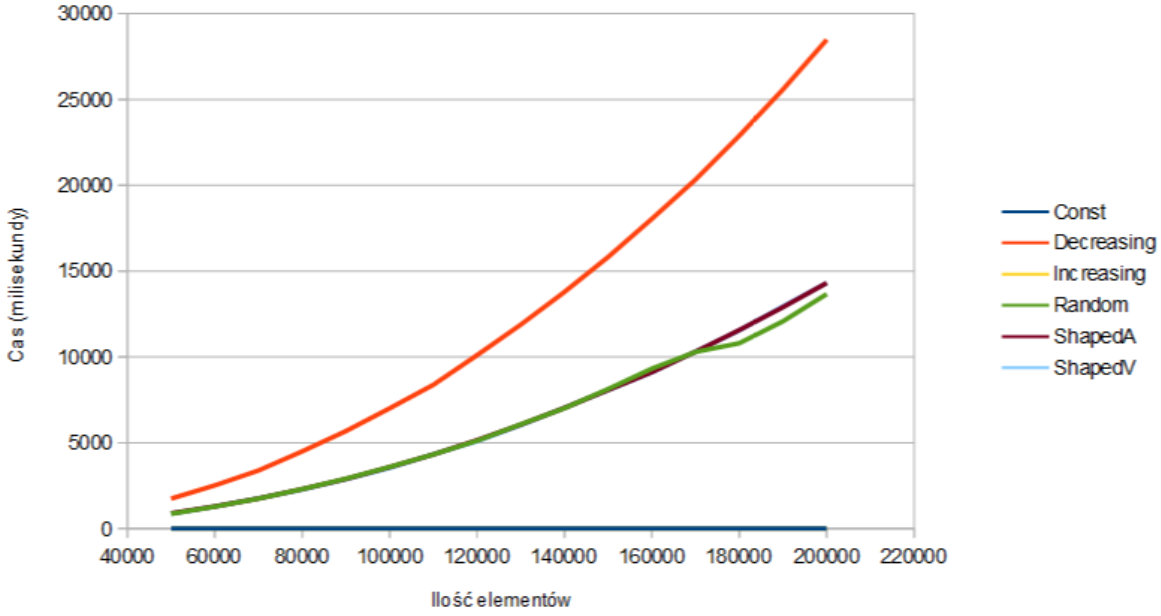
Cocktail Sort



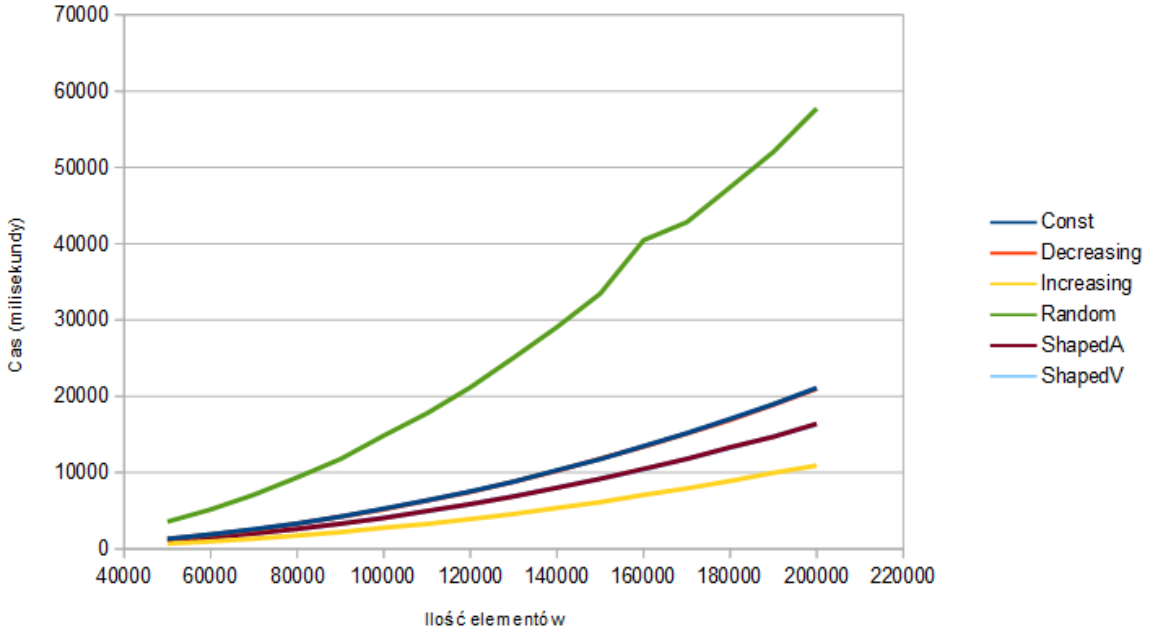
Heap Sort



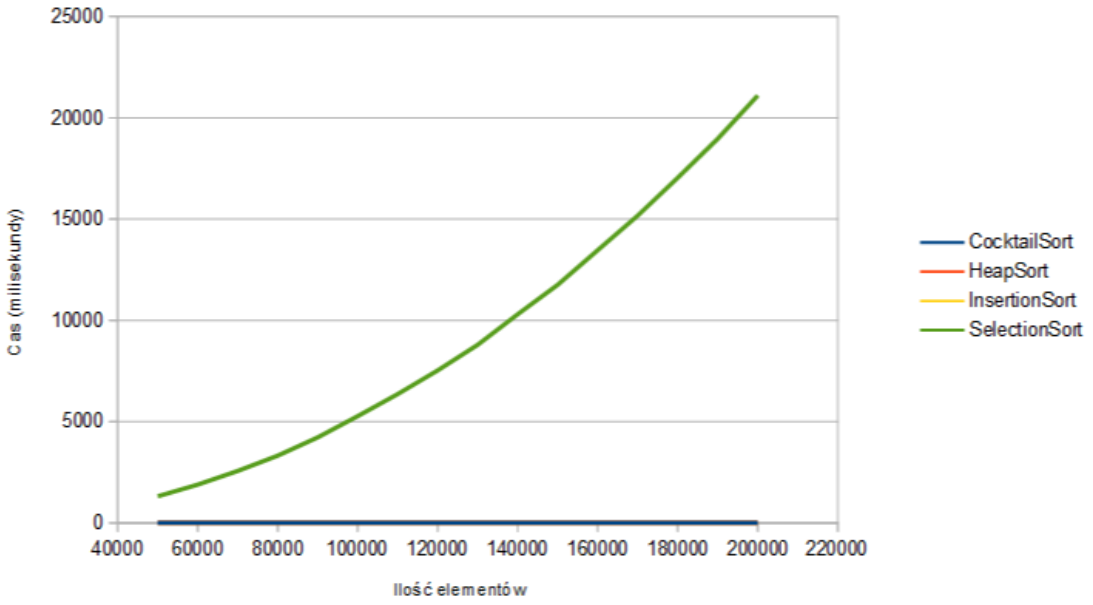
Insertion Sort



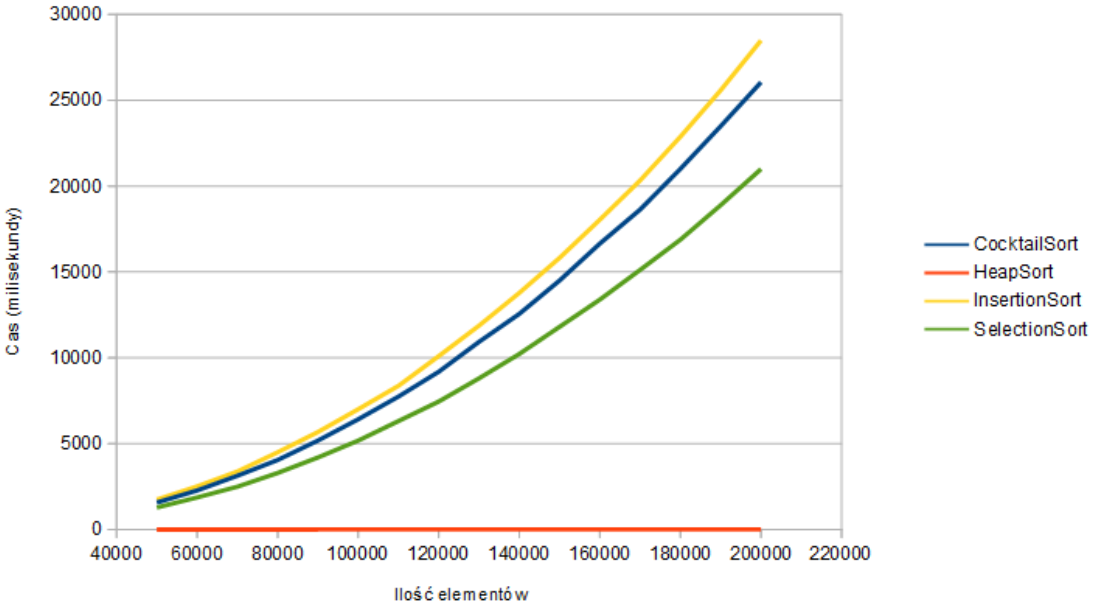
Selection Sort



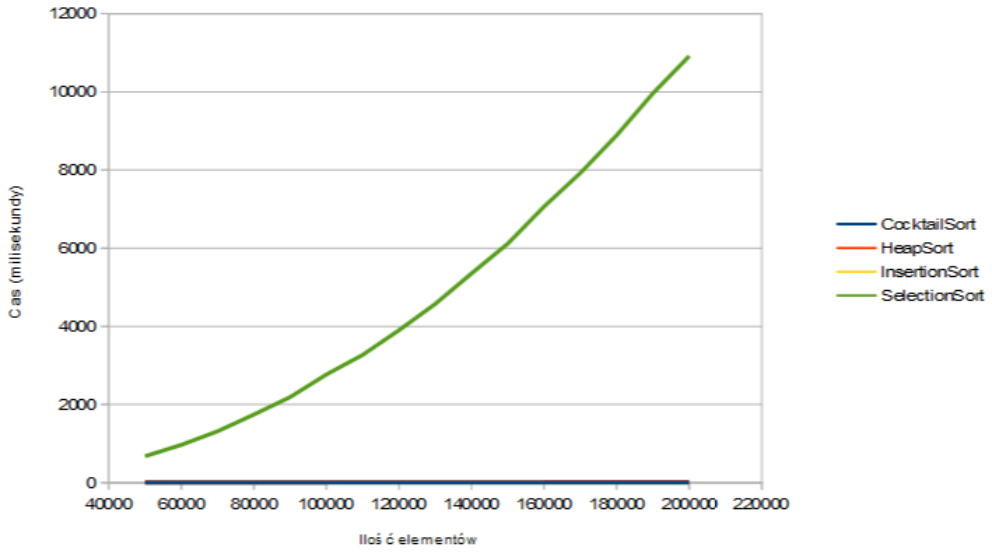
Constans:



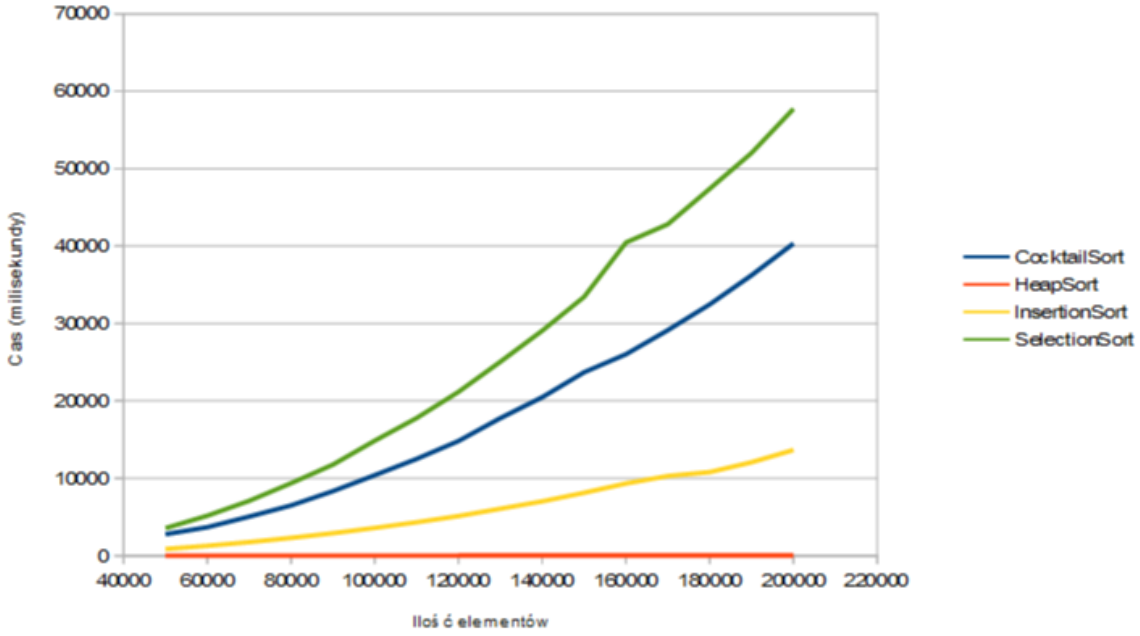
Decreasing:



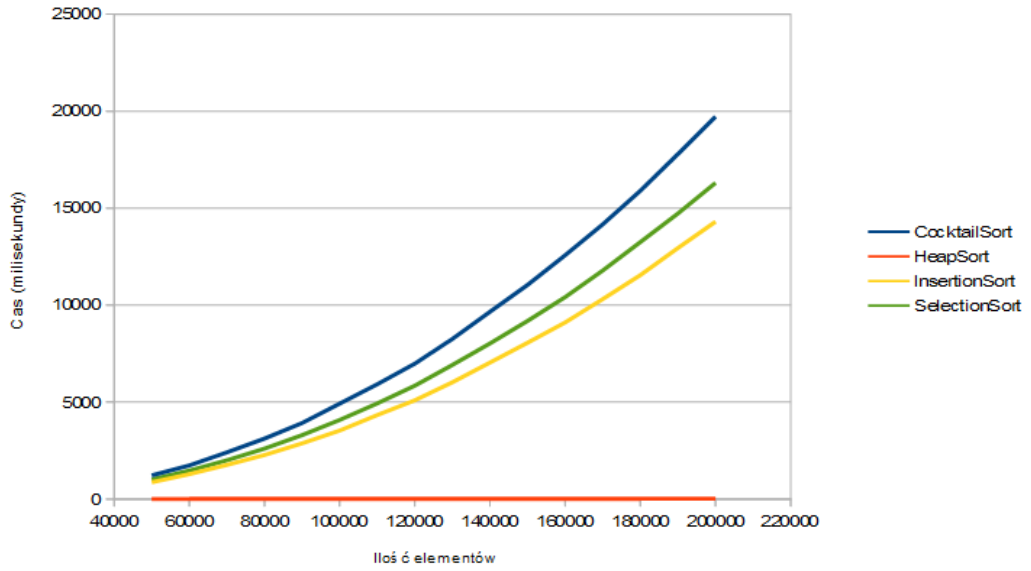
Increasing:



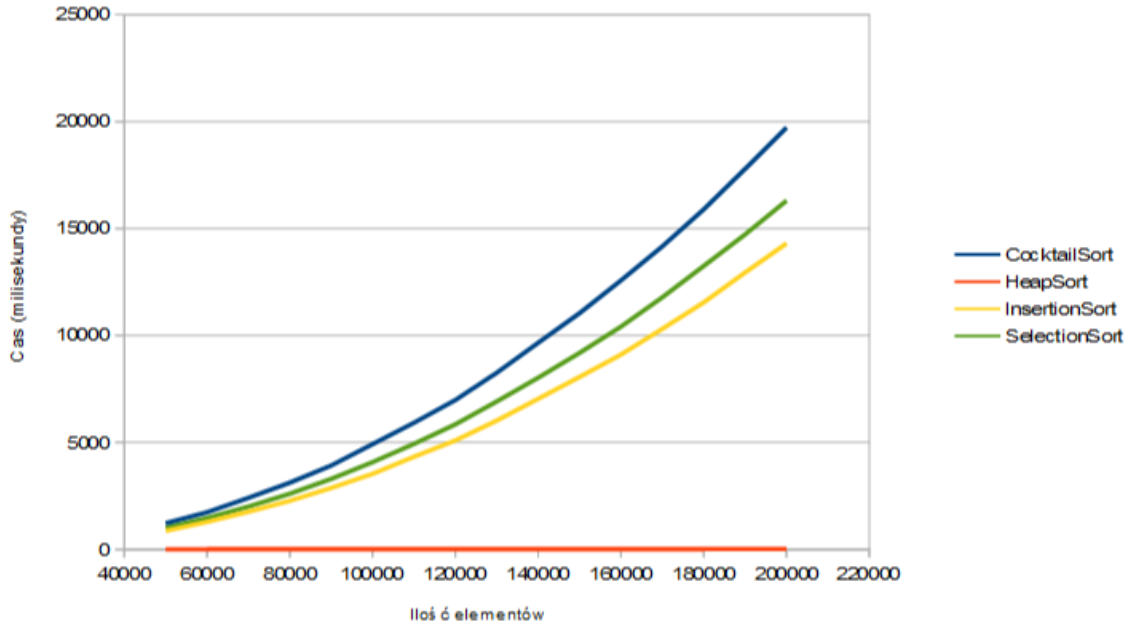
Random:



Shaped A:



Shaped V:



Wnioski:

1).

- Cocktail Sort - najszybszy do tablicy stałej najwolniejszy do tablicy malejącej,
- Heap Sort - najszybszy do tablicy stałej najwolniejszy do tablicy losowej,
- Insertion Sort - najszybszy do tablicy stałej najwolniejszy do tablicy malejącej
- Selection Sort - najszybszy do tablicy stałej najwolniejszy do tablicy malejącej

2).

- Constans - najszybszy sposób sortowania to Cocktail Sort,
- Decreasing -najszybszy sposób sortowania to Heap Sort a najwolniejszy to Insertion Sort,
- Increasing - najwolniejszy sposób do sortowania to Selection Sort,
- Random -najszybszy sposób sortowania to Heap Sort a najwolniejszy to Selection Sort,
- Shaped A - najszybszy sposób sortowania to Heap Sort a najwolniejszy to Cocktail Sort,
- Shaped V – najszybszy sposób sortowania to Heap Sort a najwolniejszy to Cocktail Sort,