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Interpolation Polynomial with Go

Contoh Input/Output
Format input:

```
n
x1 y1
x2 y2
...
xn yn
xn+1 yn+1
```

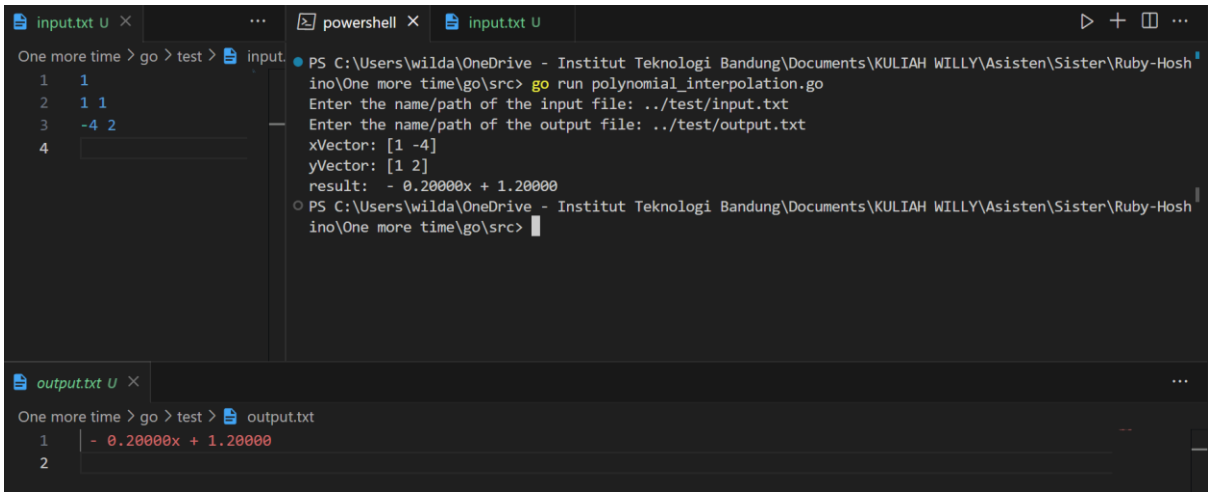
Format output:

```
ax^n + bx^n-1 + ... + px + q
```

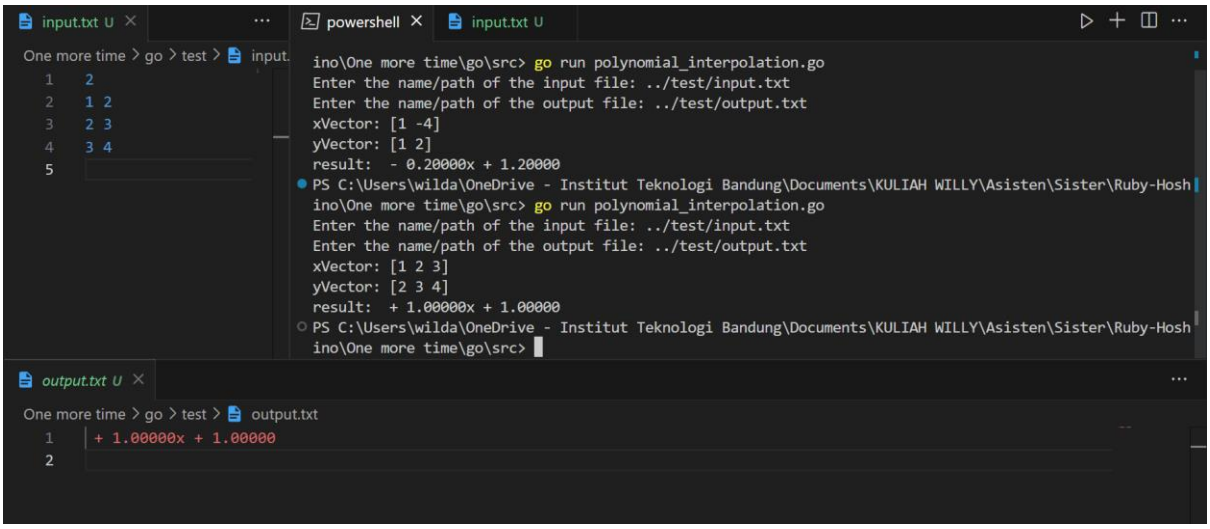
yang berarti y = `ax^n + bx^n-1 + ... + px + q`
dengan ^ merupakan pangkat yang berarti ax**n = ax^n

Jumlah titik = N + 1

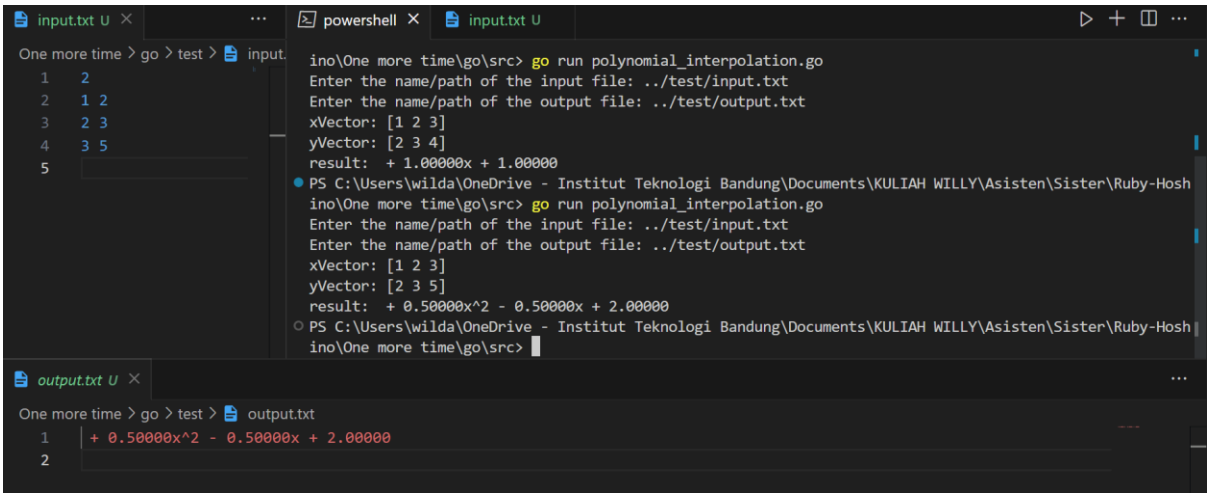
1. N = 1



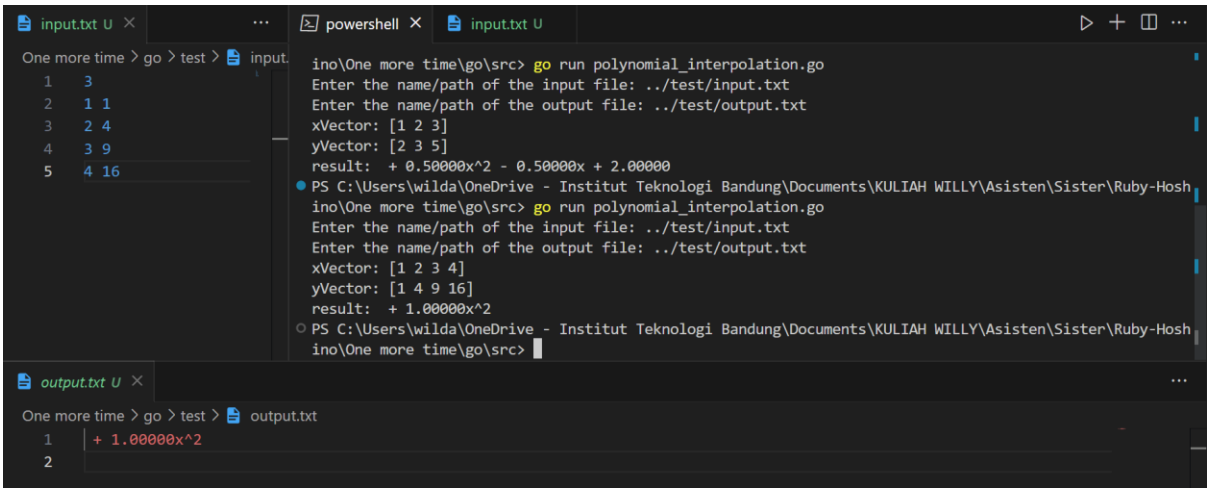
2. N = 2


input.txt U
powershell
input.txt U
One more time > go > test > input.
2
1 2
2 3
3 4
ino\One more time\go\src> go run polynomial_interpolation.go
Enter the name/path of the input file: ../test/input.txt
Enter the name/path of the output file: ../test/output.txt
xVector: [1 -4]
yVector: [1 2]
result: - 0.20000x + 1.20000
PS C:\Users\wilda\OneDrive - Institut Teknologi Bandung\Documents\KULIAH WILLY\Asisten\Sister\Ruby-Hosh
ino\One more time\go\src> go run polynomial_interpolation.go
Enter the name/path of the input file: ../test/input.txt
Enter the name/path of the output file: ../test/output.txt
xVector: [1 2 3]
yVector: [2 3 4]
result: + 1.00000x + 1.00000
PS C:\Users\wilda\OneDrive - Institut Teknologi Bandung\Documents\KULIAH WILLY\Asisten\Sister\Ruby-Hosh
ino\One more time\go\src>
output.txt U
One more time > go > test > output.txt
+ 1.00000x + 1.00000

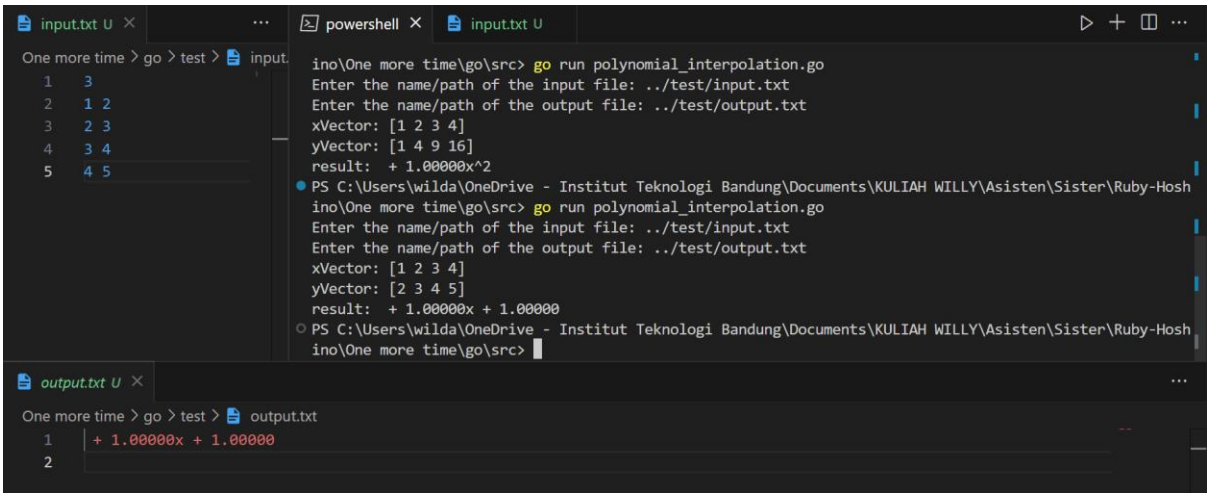
3. N = 2


input.txt U
powershell
input.txt U
One more time > go > test > input.
2
1 2
2 3
3 5
ino\One more time\go\src> go run polynomial_interpolation.go
Enter the name/path of the input file: ../test/input.txt
Enter the name/path of the output file: ../test/output.txt
xVector: [1 2 3]
yVector: [2 3 4]
result: + 1.00000x + 1.00000
PS C:\Users\wilda\OneDrive - Institut Teknologi Bandung\Documents\KULIAH WILLY\Asisten\Sister\Ruby-Hosh
ino\One more time\go\src> go run polynomial_interpolation.go
Enter the name/path of the input file: ../test/input.txt
Enter the name/path of the output file: ../test/output.txt
xVector: [1 2 3]
yVector: [2 3 5]
result: + 0.50000x^2 - 0.50000x + 2.00000
PS C:\Users\wilda\OneDrive - Institut Teknologi Bandung\Documents\KULIAH WILLY\Asisten\Sister\Ruby-Hosh
ino\One more time\go\src>
output.txt U
One more time > go > test > output.txt
+ 0.50000x^2 - 0.50000x + 2.00000

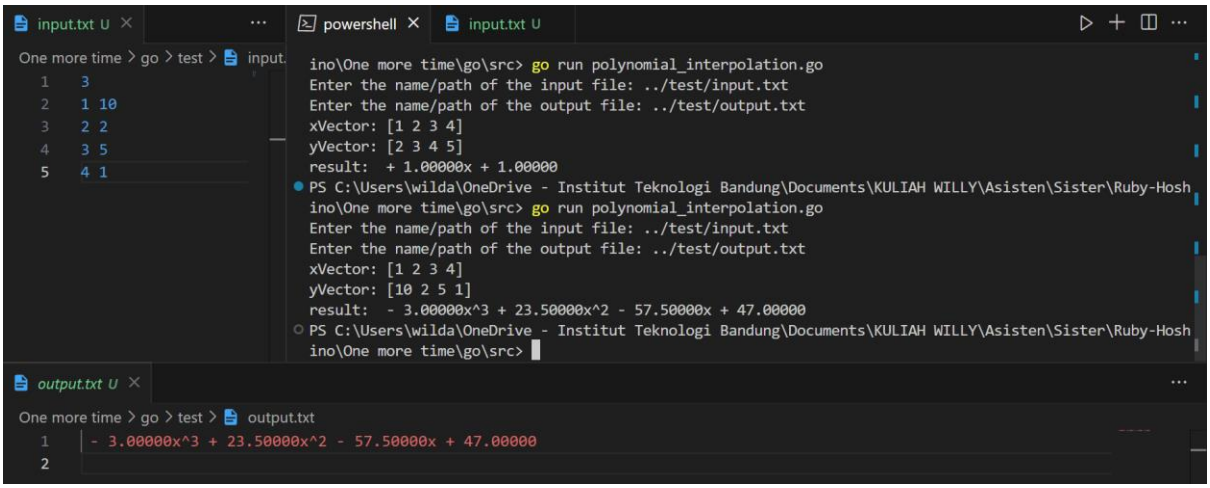
4. N = 3


input.txt U
powershell
input.txt U
One more time > go > test > input.
3
1 1
2 4
3 9
4 16
ino\One more time\go\src> go run polynomial_interpolation.go
Enter the name/path of the input file: ../test/input.txt
Enter the name/path of the output file: ../test/output.txt
xVector: [1 2 3]
yVector: [2 3 5]
result: + 0.50000x^2 - 0.50000x + 2.00000
PS C:\Users\wilda\OneDrive - Institut Teknologi Bandung\Documents\KULIAH WILLY\Asisten\Sister\Ruby-Hosh
ino\One more time\go\src> go run polynomial_interpolation.go
Enter the name/path of the input file: ../test/input.txt
Enter the name/path of the output file: ../test/output.txt
xVector: [1 2 3 4]
yVector: [1 4 9 16]
result: + 1.00000x^2
PS C:\Users\wilda\OneDrive - Institut Teknologi Bandung\Documents\KULIAH WILLY\Asisten\Sister\Ruby-Hosh
ino\One more time\go\src>
output.txt U
One more time > go > test > output.txt
+ 1.00000x^2

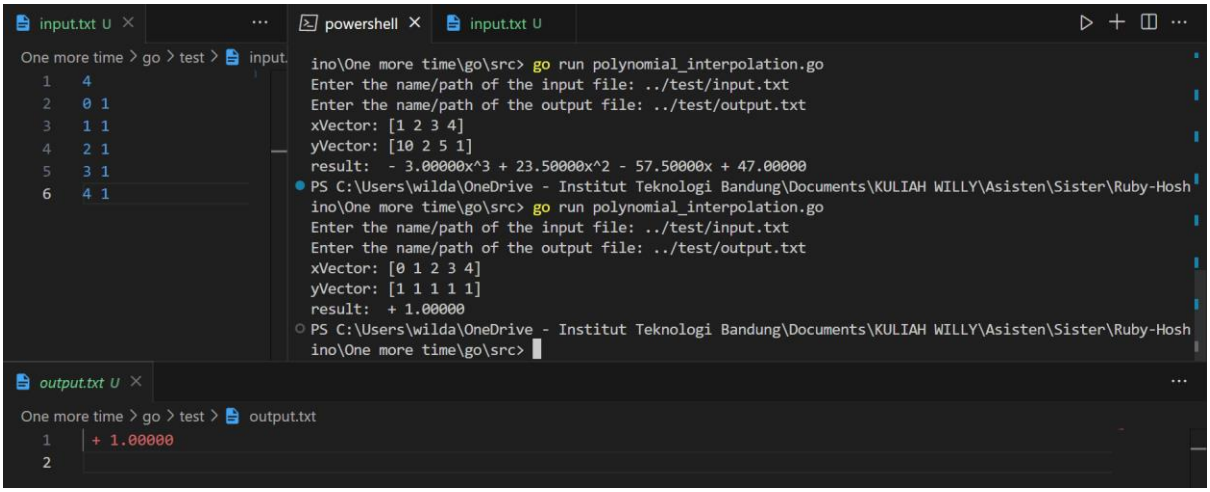
5. N = 3



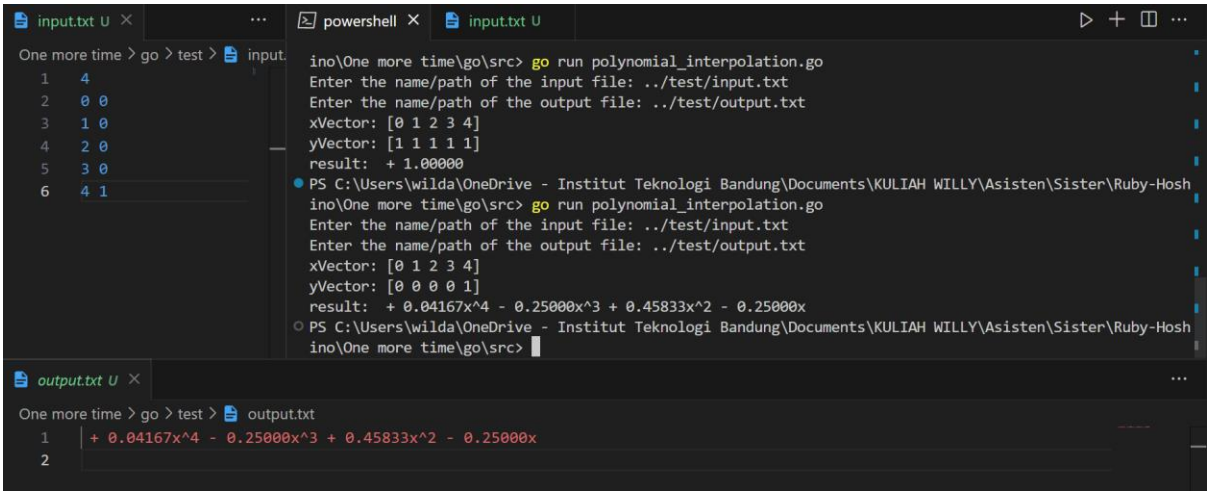
6. N = 3



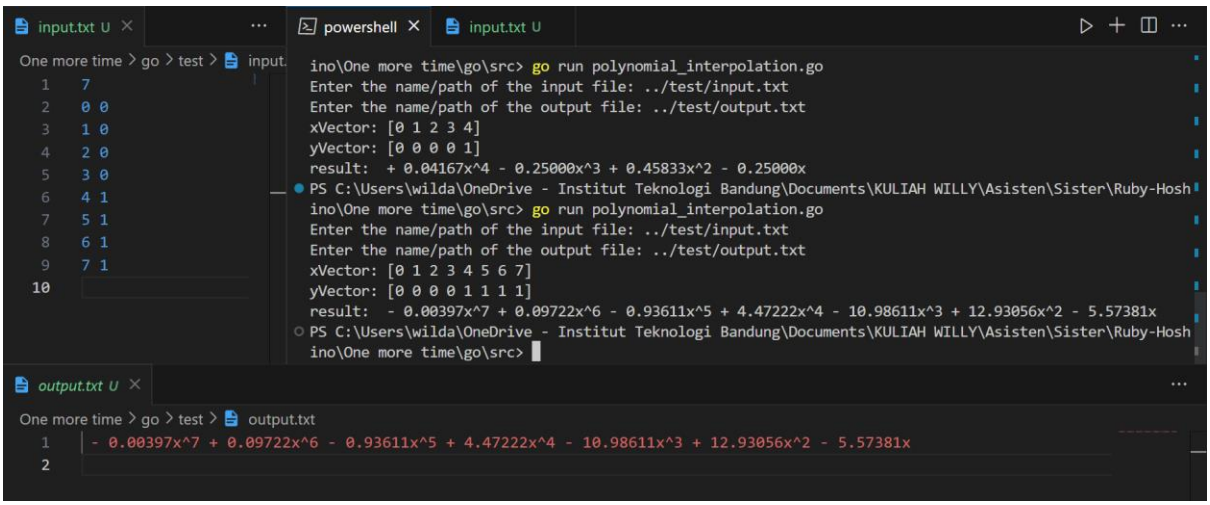
7. N = 4



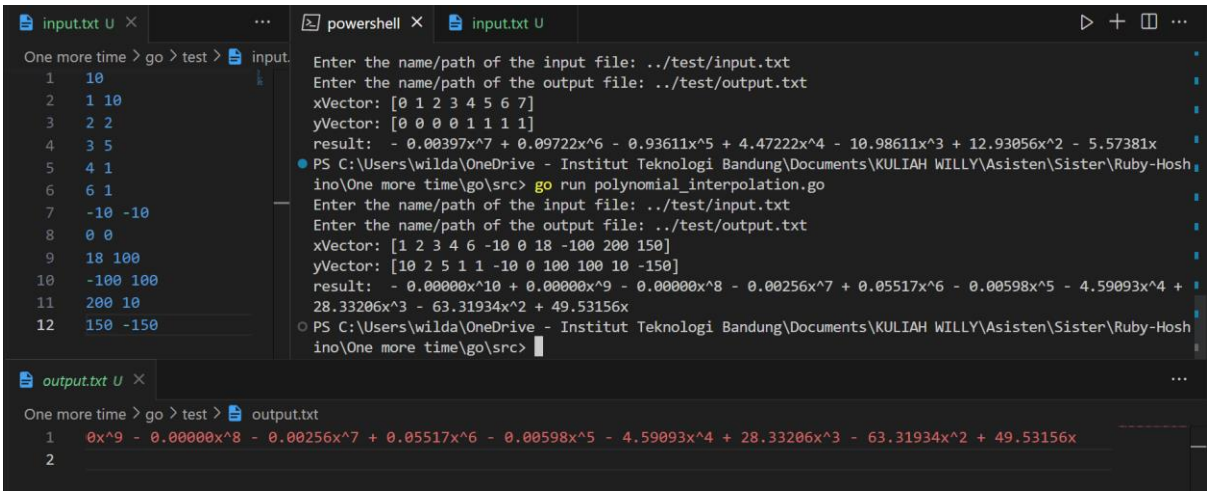
8. N = 4


input.txt U
One more time > go > test > input.
4
0 0
1 0
2 0
3 0
4 1
powershell
input.txt U
ino\One more time\go\src> go run polynomial_interpolation.go
Enter the name/path of the input file: ../test/input.txt
Enter the name/path of the output file: ../test/output.txt
xVector: [0 1 2 3 4]
yVector: [1 1 1 1 1]
result: + 1.00000
PS C:\Users\wilda\OneDrive - Institut Teknologi Bandung\Documents\KULIAH WILLY\Asisten\Sister\Ruby-Hosh
ino\One more time\go\src> go run polynomial_interpolation.go
Enter the name/path of the input file: ../test/input.txt
Enter the name/path of the output file: ../test/output.txt
xVector: [0 1 2 3 4]
yVector: [0 0 0 0 1]
result: + 0.04167x^4 - 0.25000x^3 + 0.45833x^2 - 0.25000x
PS C:\Users\wilda\OneDrive - Institut Teknologi Bandung\Documents\KULIAH WILLY\Asisten\Sister\Ruby-Hosh
ino\One more time\go\src>
output.txt U
One more time > go > test > output.txt
+ 0.04167x^4 - 0.25000x^3 + 0.45833x^2 - 0.25000x

9. N = 7


input.txt U
One more time > go > test > input.
7
0 0
1 0
2 0
3 0
4 1
5 1
6 1
7 1
powershell
input.txt U
ino\One more time\go\src> go run polynomial_interpolation.go
Enter the name/path of the input file: ../test/input.txt
Enter the name/path of the output file: ../test/output.txt
xVector: [0 1 2 3 4]
yVector: [0 0 0 0 1]
result: + 0.04167x^4 - 0.25000x^3 + 0.45833x^2 - 0.25000x
PS C:\Users\wilda\OneDrive - Institut Teknologi Bandung\Documents\KULIAH WILLY\Asisten\Sister\Ruby-Hosh
ino\One more time\go\src> go run polynomial_interpolation.go
Enter the name/path of the input file: ../test/input.txt
Enter the name/path of the output file: ../test/output.txt
xVector: [0 1 2 3 4 5 6 7]
yVector: [0 0 0 0 1 1 1 1]
result: - 0.00397x^7 + 0.09722x^6 - 0.93611x^5 + 4.47222x^4 - 10.98611x^3 + 12.93056x^2 - 5.57381x
PS C:\Users\wilda\OneDrive - Institut Teknologi Bandung\Documents\KULIAH WILLY\Asisten\Sister\Ruby-Hosh
ino\One more time\go\src>
output.txt U
One more time > go > test > output.txt
- 0.00397x^7 + 0.09722x^6 - 0.93611x^5 + 4.47222x^4 - 10.98611x^3 + 12.93056x^2 - 5.57381x

10. N = 10


input.txt U
One more time > go > test > input.
10
1 10
2 2
3 5
4 1
6 1
-10 -10
0 0
18 100
-100 100
200 10
150 -150
powershell
input.txt U
Enter the name/path of the input file: ../test/input.txt
Enter the name/path of the output file: ../test/output.txt
xVector: [0 1 2 3 4 5 6 7]
yVector: [0 0 0 0 1 1 1 1]
result: - 0.00397x^7 + 0.09722x^6 - 0.93611x^5 + 4.47222x^4 - 10.98611x^3 + 12.93056x^2 - 5.57381x
PS C:\Users\wilda\OneDrive - Institut Teknologi Bandung\Documents\KULIAH WILLY\Asisten\Sister\Ruby-Hosh
ino\One more time\go\src> go run polynomial_interpolation.go
Enter the name/path of the input file: ../test/input.txt
Enter the name/path of the output file: ../test/output.txt
xVector: [1 2 3 4 6 -10 0 18 -100 200 150]
yVector: [10 2 5 1 1 -10 0 100 100 10 -150]
result: - 0.00000x^10 + 0.00000x^9 - 0.00000x^8 - 0.00256x^7 + 0.05517x^6 - 0.00598x^5 - 4.59093x^4 + 28.33206x^3 - 63.31934x^2 + 49.53156x
PS C:\Users\wilda\OneDrive - Institut Teknologi Bandung\Documents\KULIAH WILLY\Asisten\Sister\Ruby-Hosh
ino\One more time\go\src>
output.txt U
One more time > go > test > output.txt
0x^9 - 0.00000x^8 - 0.00256x^7 + 0.05517x^6 - 0.00598x^5 - 4.59093x^4 + 28.33206x^3 - 63.31934x^2 + 49.53156x