Computer_Homework1

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Chapter 1

File Index

1.1 File List

Here is a list of all documented files with brief descriptions:

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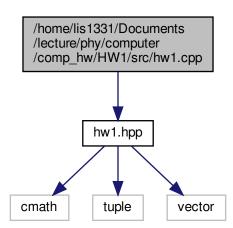
Chapter 2

File Documentation

2.1 /home/lis1331/Documents/lecture/phy/computer/comp_hw/HW1/src/hw1.cpp File Reference

code for homework1 of Computer1 class in Yonsei University Use explicit Euler Method to solve Kepler problem

#include "hwl.hpp"
Include dependency graph for hw1.cpp:



Functions

• tuple< vector< double >, vector< double >> HW1 (double t0, double t1, int n, double y0, double y0p)

HW1: Solve Kepler problem via explicit Euler Method with inital condition.

4 File Documentation

2.1.1 Detailed Description

code for homework1 of Computer1 class in Yonsei University Use explicit Euler Method to solve Kepler problem

Author

```
pistack (Junho Lee)
```

Date

```
2021. 10. 10.
```

2.1.2 Function Documentation

2.1.2.1 HW1()

```
tuple<vector<double>, vector<double> > HW1 ( double t0, double t1, int n, double y0, double y0p)
```

HW1: Solve Kepler problem via explicit Euler Method with inital condition.

- $zeta(0) = z_0$
- $zeta'(0) = z'_0$ see HW1.pdf for futher detail

Parameters

t0	initial time
t1	final time
n	number of gird points to evaluate
y0	initial condition for zeta(0)
у0р	intial condition for zeta'(0)

Returns

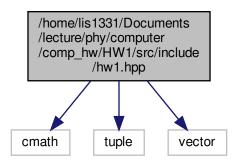
tuple of time and zeta

2.2 /home/lis1331/Documents/lecture/phy/computer/comp_hw/HW1/src/include/hw1.hpp File Reference

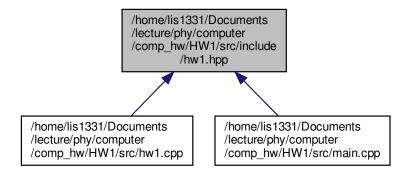
Header file for homework1 of Computer1 class in Yonsei University Use explicit Euler Method to solve Kepler problem.

```
#include <cmath>
#include <tuple>
#include <vector>
```

Include dependency graph for hw1.hpp:



This graph shows which files directly or indirectly include this file:



Functions

std::tuple< std::vector< double >, std::vector< double >> HW1 (double t0, double t1, int n, double y0, double y0p)

HW1: Solve Kepler problem via explicit Euler Method with inital condition.

2.2.1 Detailed Description

Header file for homework1 of Computer1 class in Yonsei University Use explicit Euler Method to solve Kepler problem. 6 File Documentation

```
Author
```

```
pistack (Junho Lee)
```

Date

2021, 10, 10,

2.2.2 Function Documentation

```
2.2.2.1 HW1()
```

HW1: Solve Kepler problem via explicit Euler Method with inital condition.

- $zeta(0) = z_0$
- zeta'(0) = z'_0 see HW1.pdf for futher detail

Parameters

t0	initial time
t1	final time
n	number of gird points to evaluate
y0	initial condition for zeta(0)
у0р	intial condition for zeta'(0)

Returns

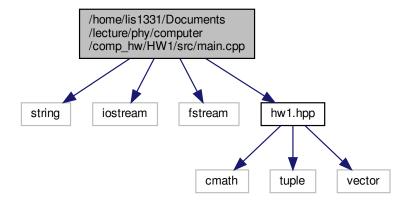
tuple of time and zeta

2.3 /home/lis1331/Documents/lecture/phy/computer/comp_hw/HW1/src/main.cpp File Reference

main program for homework1 of Computer1 class in Yonsei University Interactively reads inital condition, number of gird points to evaluate and output file name then computes and saves solution.

```
#include <string>
#include <iostream>
#include <fstream>
```

#include "hw1.hpp"
Include dependency graph for main.cpp:



Functions

• int main (void)

2.3.1 Detailed Description

main program for homework1 of Computer1 class in Yonsei University Interactively reads inital condition, number of gird points to evaluate and output file name then computes and saves solution.

Author

pistack (Junho Lee)

Date

2021. 10. 10.

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