Square matrix multiplication

Environment: java 1.8

Import packages:java.io,java.util;

Java version1.8

file contains

file:Adaptive_Mutliply

class:Adaptive_Mutliply:

findtipe

calculate

strassen

general

subclass: Matrix

variables

construction]

INSTRUCTIONS:

to create the Adaptive_Multiply class, you need a absolute path of range , you can create a txt file and add a 0 in it ,then this path is ok

Steps:

1.Open the terminal and find the file of class and open it with the path of reference.
It may take several Min to initialize when your range is origin(0).

2. Choose the type and enter parameters according to the text prompts
(hint:In the terminal , you can only use the first way below to create matrix.)

3.Then it will print the final result of your calculation.
Here is a example of this program:

1.

```
java Adaptive_Mutliply range.txt
```

then you will see:

Choose the type you want to calculate(input 1 or 2):

1.multiply

2.power

2.we use power as example:

2

input your matrix path:

config.txt

input the power

3

then you get the answer in a test file in the package.

Matrix creation help:

you can insert your matrix in 3 ways
The example is in the project file.
1 read from a file:
the file should contain the information of dimension and the matrix value, such as:
2
1 1
1 1

!The following two type need you edit the code and run in editor such as intellij:
2.create by a long array, the square root of array should be even, if not please increase the matrax by 0 and fill the enlarge boolean to true. such as:

Matrix({1,1,1,0,1,1,1,0,1,1,1,0,0,0,0,0},true and the out put string will be 3*3
3.create by dimension, if the dimension is odd, it will automatically enlarged to even
and you can fill the long array later.
for example:

```
public static void main(String[] args) throws IOException {//test
        long[] a=new long[]{1,1,1,1,1,1,
        1,1,1,1,1,1,
        1,1,1,1,1,1,
        1,1,1,1,1,1,
        1,1,1,1,1,1,
```

```
        1,1,1,1,1,1,};
        long[] b=new long[]{1,1,1,1};
        Matrix ax=new Matrix("C:\\Users\\Downloads\\src\\config.txt");
        Matrix bx=new Matrix(b,false);
        Matrix cx=new Matrix(3);
        Adaptive_Mutliply                                                    m=new
Adaptive_Mutliply("C:\\Users\\Downloads\\src\\range.txt");
        Matrix xx=m.power_calculate(bx,10);
```