

# Input for Contests

Scanners and Files

```
Scanner scan = new Scanner(System.in);
```

```
Scanner scan = new Scanner(new FileReader("data.in"));
```

10

C E G A#  
B F D G  
E G# B D  
F# A C D  
B D G A#  
F G# A# D  
C# D# G A#  
A A A G  
D# F A C  
A# C# D# G

New character  
starts at a space  
OR at a new line

```
String n=scan.next();
```

10

C E G A#

B F D G

E G# B D

F# A C D

B D G A#

F G# A# D

C# D# G A#

A A A G

D# F A C

A# C# D# G

New character  
starts at a space  
OR at a new line

```
n=scan.next();
```

10

C E G A#

B F D G

E G# B D

F# A C D

B D G A#

F G# A# D

C# D# G A#

A A A G

D# F A C

A# C# D# G

New character  
starts at a space  
OR at a new line

```
n=scan.next();
```

10

C E **G** A#

B F D G

E G# B D

F# A C D

B D G A#

F G# A# D

C# D# G A#

A A A G

D# F A C

A# C# D# G

New character  
starts at a space  
OR at a new line

```
n=scan.next();
```

10

C E G **A#**

B F D G

E G# B D

F# A C D

B D G A#

F G# A# D

C# D# G A#

A A A G

D# F A C

A# C# D# G

New character  
starts at a space  
OR at a new line

```
n=scan.next();
```

10

C E G A#

B F D G

E G# B D

F# A C D

B D G A#

F G# A# D

C# D# G A#

A A A G

D# F A C

A# C# D# G

New character  
starts at a space  
OR at a new line

```
n=scan.next();
```

10

C E G A#

B **F** D G

E G# B D

F# A C D

B D G A#

F G# A# D

C# D# G A#

A A A G

D# F A C

A# C# D# G

New character  
starts at a space  
OR at a new line

```
n=scan.next();
```

```
import java.util.*; //libraries for Scanners
import java.io.*;

public class Y2020_J1 {
    public static void main(String args[]) throws IOException {

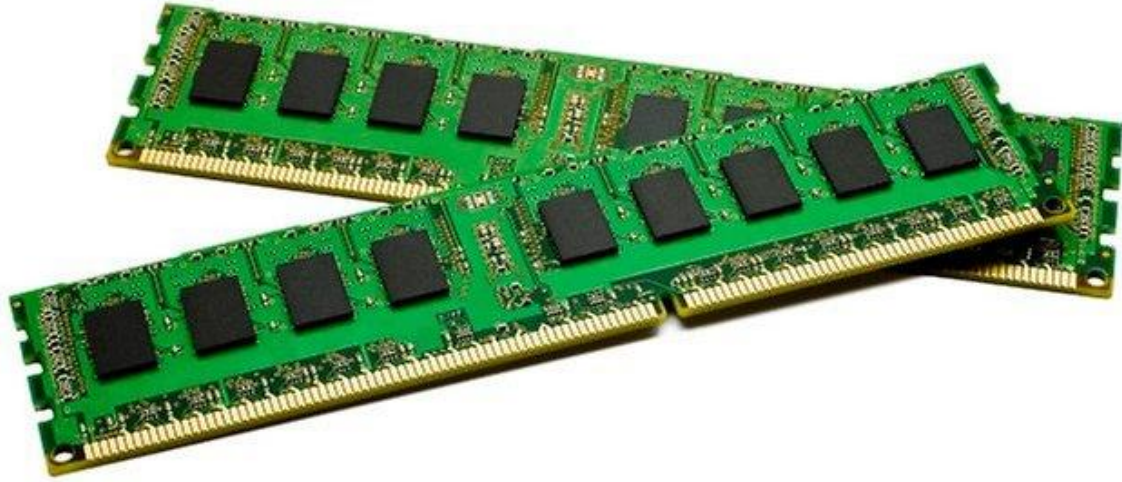
        Scanner scan = new Scanner(System.in); //opens scanner

        int s = scan.nextInt(); //gets numbers
        int m = scan.nextInt(); //no prompts for the contest
        int l = scan.nextInt();

        int total = s + m*2 + l*3;

        if(total >=10)
            System.out.println("happy");
        else
            System.out.println("sad");

        scan.close(); //closes off scanner, not mandatory
    }
}
```



Temporary  
Fast (close to CPU)

Variables  
“Open” things

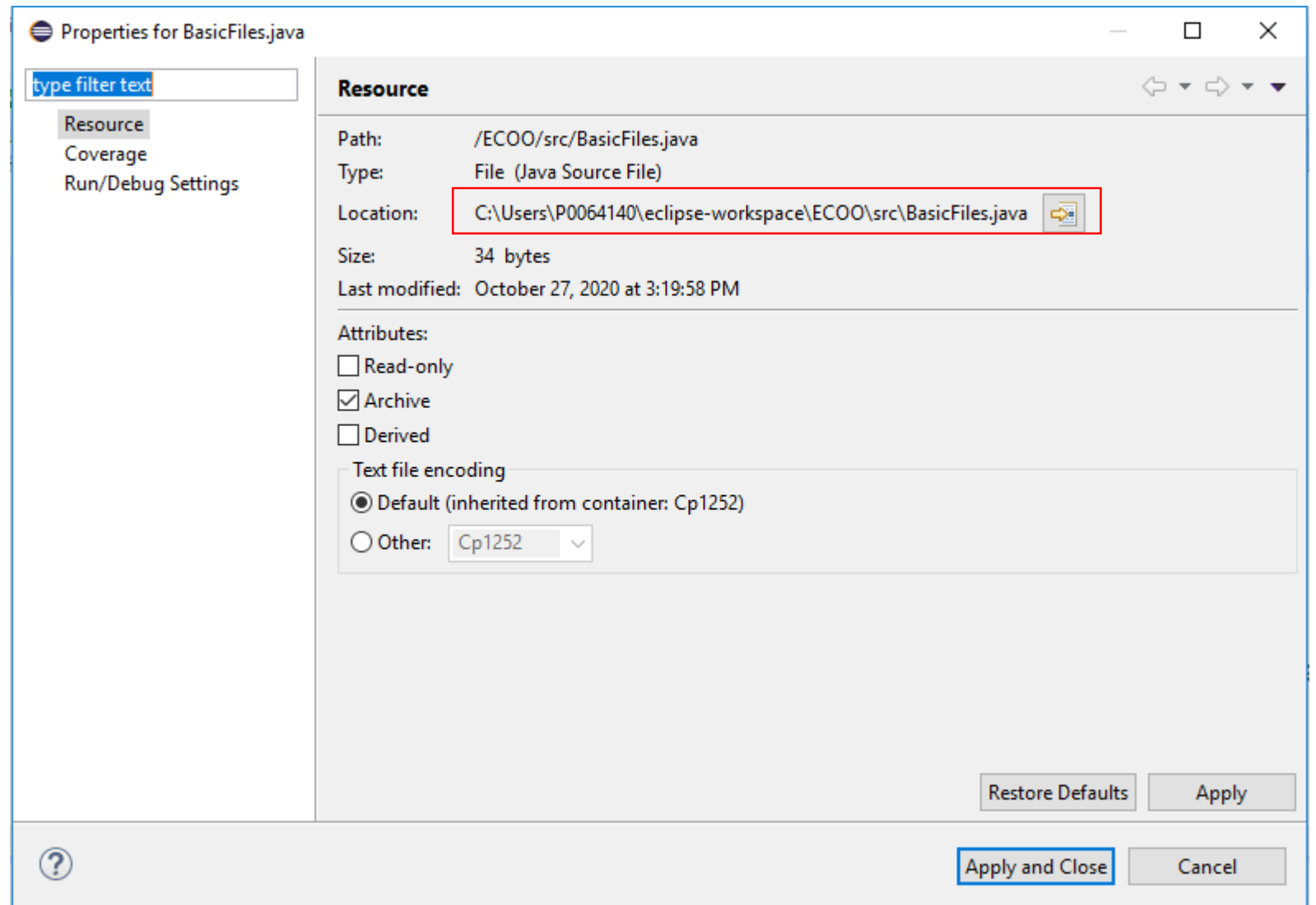


Permanent  
Slow (far from CPU)

Files  
“Saved” things

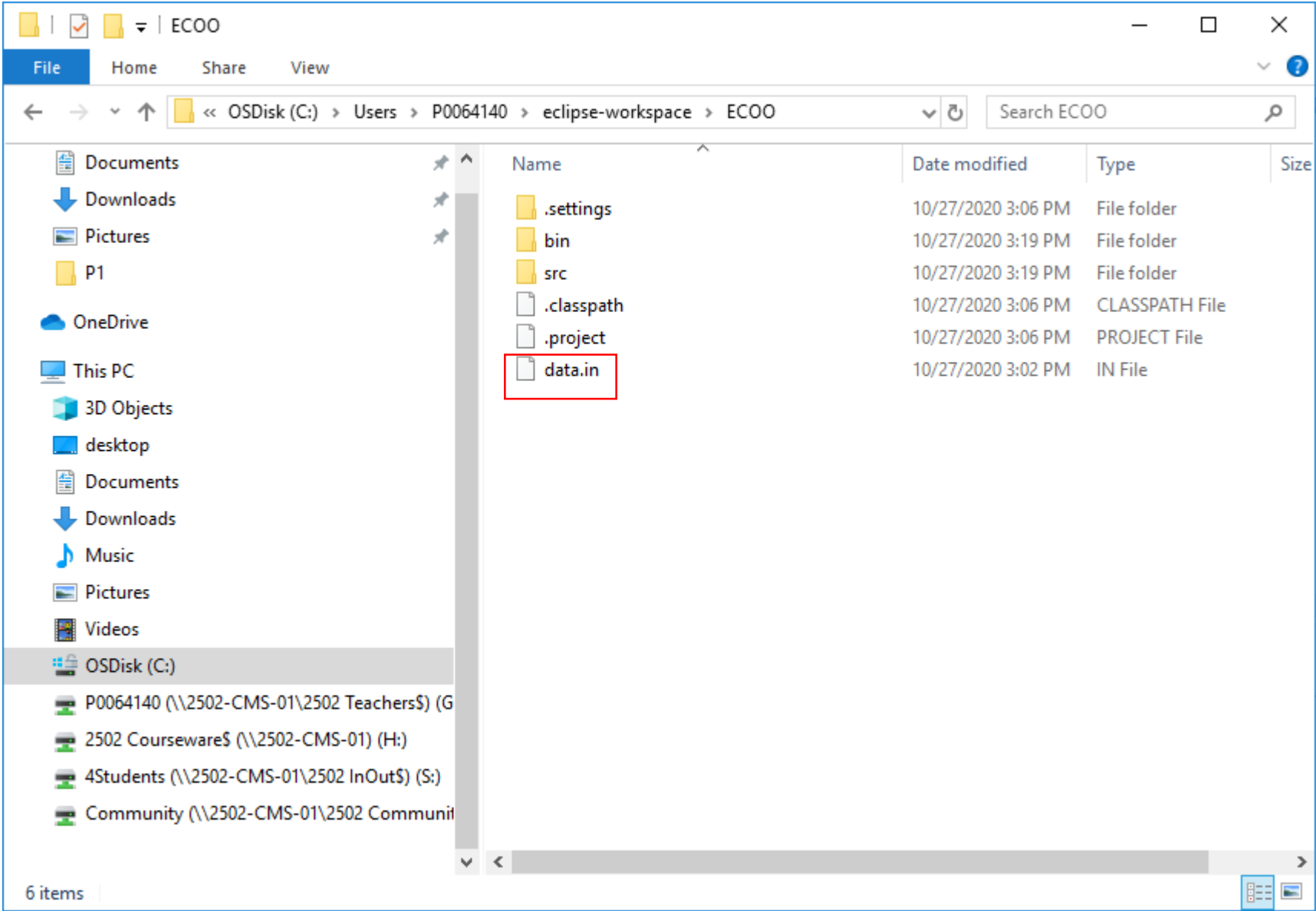
To place your file correctly, first find your filepath.

File >  
Properties




Put your file  
in that  
folder

NOT in bin  
or src



```
import java.util.*;  
import java.io.*;
```




Two libraries  
required

```
try {
```

```
    //code here
```

```
} catch(IOException e) {  
}
```



Wrap a try catch  
statement around  
your files code

```
import java.util.*; //libraries for Scanners
import java.io.*;

public class BasicFiles {
    public static void main(String args[]) {
        new BasicFiles();
    }
    public BasicFiles() {
        try {
            Scanner scan = new Scanner(new FileReader("data.in"));

            int s = scan.nextInt(); //gets numbers
            String n=scan.next(); //gets text

            scan.close(); //closes off scanner, not mandatory

        } catch(IOException e) {
            //Needed for files
        }
    }
}
```