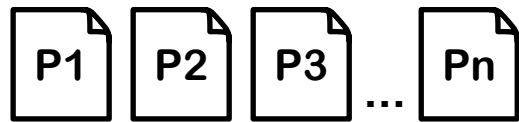




```
programs = getPrograms();
```



Step 1

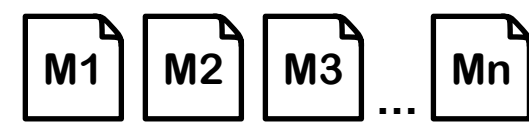
```
foreach program in programs {
```

```
tests = getTests(program);
```



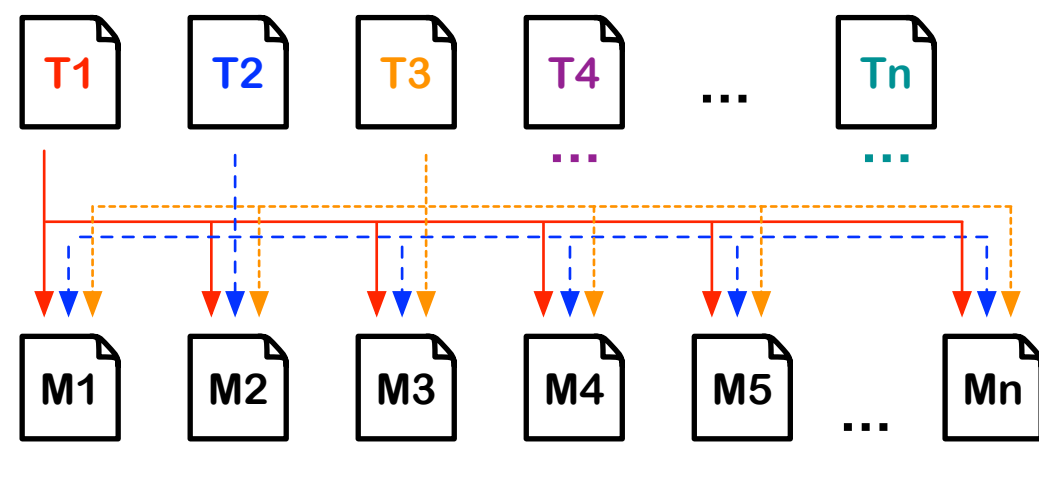
Step 2

```
mutants = getMutants(program);
```



Step 3

```
map = runAllTestsInAllMutants(tests, mutants);
```



Step 4

```
identifyCandidates(map);
```

Mutant	Failed Tests
M1	T1, T4
M2	None
M3	T2, T4
M4	T1
M5	T2, T4
...	...
Mn	T2, T4, T9

M2 is an **Equivalent** candidate

M3 and M5 are **Duplicated** candidates

Step 5

```
} // end of foreach
```

```
public class ClassId_0 {  
    protected long fieldId_0;  
    protected int fieldId_1;  
  
    public long methodId_0(long a) {  
        if (fieldId_0 > fieldId_1) {  
            return fieldId_0 = fieldId_1 + 1;  
        }  
        return a;  
    }  
}
```

P1

```
public class ClassId_0 {  
    protected long fieldId_0;  
    protected int fieldId_1;  
  
    public long methodId_0(long a) {  
        if (fieldId_0 > fieldId_1) {  
            return fieldId_0 = fieldId_1 + 1;  
        }  
        return a++;  
    }  
}
```

M2

```
public class ClassId_0 {  
    protected long fieldId_0;  
    protected int fieldId_1;  
  
    public long methodId_0(long a) {  
        if (fieldId_0 > fieldId_1) {  
            return fieldId_0 = fieldId_1;  
        }  
        return a;  
    }  
}
```

M3

```
public class ClassId_0 {  
    protected long fieldId_0;  
    protected int fieldId_1;  
  
    public long methodId_0(long a) {  
        if (fieldId_0 > fieldId_1) {  
            return fieldId_0 = fieldId_1 * 1;  
        }  
        return a;  
    }  
}
```

M5