Comments

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TEST AUTOMATION ENGINEER

Useless Comment

```
class Customer {

  String name; // customer name

  // get customer age
  int getAge(){
    return name;
  }
}
```

Comments are a necessary evil

Why We Write Comments

- Helps to understand code

- Express personal opinion

- Disable functionality

Typical Comment

Noise

Signal

80%

20%

Module Overview

- Redundant comments

- Misleading comments

- Useless and misplaced comments

- Commented out code

- Legitimate comments

Useless Comment

```
// loops over a list of books

for(Book book : books){

    if(book.getTitle().equals("Lord of The Rings")){

        return true;

    }

}
```

Compensating Comment

```
class Patient {

    int in; // insurance number      ❌
    int insuranceNumber;             ✓

}
```

"The proper use of comments is to compensate for our failure to express ourselves in code."

Robert C. Martin

Don't comment bad code – rewrite it!

Marker Comment

```java
public String getPersonalInfo(Person person, int pin){

    if (systemIsUp){

        if (person != null && person.getName().equals("")){

            return "Invalid Name";

        }

        return "System is down at the moment";

    } // end of first if statement  ❌

    return person.getPersonalInfo();

}
```

Code Smell

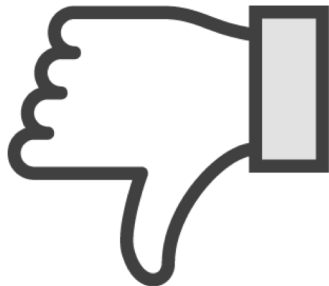Any characteristic in the source code of a program that possibly indicates a deeper problem

VCS and Wiki Comment

```
// Fixed a nasty bug on 27th        ✖
// Optimized perf on 3rd of March   ✖
// TODO

public String someComplexMethod(){

    // ...

  }
```

Bad TODOs

// **TODO**

// **TODO: Fix this**

// **Commented out code with TODO**

Comments often lie

Lying Comment

```
class Person {

    // Return data as a String

    PersonalData getPersonalData(){
        // ...
    }
}
```

Commented out Code

```java
public String getPersonalInfo(Person person){

    // if (systemIsUp){ TODO

        return person.getPersonalInfo();

    // }

}
```

Never do this!

Good Comments

JavaDoc

Compensate for factors outside of your control

TODOs with an explainer or issue tracker number

```
//TODO: ISSUE-1234

// some code that needs fixing
```

ISSUE-1234

Description:

To fix by date:

Assignee:

Summary

✓ | **Comments shouldn't compensate for bad code**

✓ | **Obvious comments should be removed**

✓ | **Useful comments**