

Clean Code

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A Handbook of Agile Software Craftsmanship

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CH2 Meaningful Names

Variable Names

Function Names

Class Names

CH2 Meaningful Names

Names should

- tell you **why** it exists, **what** it does, and **how** it is used.

```
def sendtostore_packagestock0  
→ def calculate_stock_with_notifying_store
```

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Names should

- tell you why it exists, what it does, and how it is used.
- allow readers to understand difference **without comment** nor deduction.

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Names should

- tell you why it exists, what it does, and how it is used.
- allow readers to understand difference without comment nor deduction.
- include **semantic** words.

```
def sendtostore_packagestock0  
def sendtostore_packagestock1
```

CH2 Meaningful Names

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- tell you why it exists, what it does, and how it is used.
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- include semantic words.
- include words that are technical or related to the **problem domain**.

```
def calculate_rate  
→ def calculate_surcharge
```

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- have **context** from its scope.

Package_stock.package_stock_id
→ Package_stock.id

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- include semantic words.
- include words that are technical or related to the problem domain.
- have context from its scope.
- consists of **words**.

daydelay
→ days_delayed

CH2 Meaningful Names

Names should **not**

- include **obscure clues** that may lead to false conclusions.

```
def create_invoice_with_assurance  
  → def create_invoice_with_retry
```

CH2 Meaningful Names

Names should **not**

- include obscure clues that may lead to false conclusions.
- use **inconsistent synonyms** for a single concept.

```
(‘calculate_stock_with_notifying_store’ exists)  
def send_mail_to_branch  
→ def send_mail_to_store
```

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- use inconsistent synonyms for a single concept.
- include **syntactic** encodings.

v_count
→ count

CH2 Meaningful Names

Names should **not**

- include obscure clues that may lead to false conclusions.
- use inconsistent synonyms for a single concept.
- include syntactic encodings.
- consists of **over-abbreviated** letters.

```
def get_psscharge  
→ def get_package_stock_surcharge
```

CH2 Meaningful Names

- Prefer **clarity** to smartness and entertainment.

```
_, _ = select.select([], [])  
→ discarded, discarded = select.select(list(), list())
```

CH2 Meaningful Names

- Prefer clarity to smartness and entertainment.
- Class names are nouns or **noun phrases**.

```
class SlackNotify  
→ class SlackNotification
```

CH2 Meaningful Names

- Prefer clarity to smartness and entertainment.
- Class names are nouns or noun phrases.
- Method names are verbs or **verb phrases**.

```
def surcharge_calculation  
→ def calculate_surcharge
```

CH3 Functions

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- include steps within one level of abstraction.
- have **two arguments at maximum**, taking advantage of argument objects/lists.

```
def send_mail_with_file(email_from, email_to, subject, html_content, attach_file_path,  
                        attach_file_name, mime_type)  
    → def send_mail_with_file(base_email, attachment)
```

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- pass Boolean **flag argument** as it forces more than one behavior.

```
calculate_surcharge(is_promotion=False, ...)  
→ calculate_surcharge, calculate_surcharge_for_promotion
```

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Functions should **not**

- expose switch statements, which do multiple things inherently, to the high level.
- pass Boolean flag argument as it forces more than one behavior.
- **transform input argument** instead of using return value.

```
...  
charge_list.sort()  
...  
return
```

→

```
...  
charge_list_sorted = sorted(charge_list)  
...  
return charge_list_sorted
```

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- have side effects that are **not implied by names**.

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- perform command and query **at the same time**.
- perform action and error handling **at the same time**.

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- perform command and query at the same time.
- perform action and error handling at the same time.
- have **multiple entries or exits**.