"Name carefully- as if your first-born child."

- Think carefully and don't settle
  - Try different names until you're happy
  - Learn to use built-in IDE refactoring features

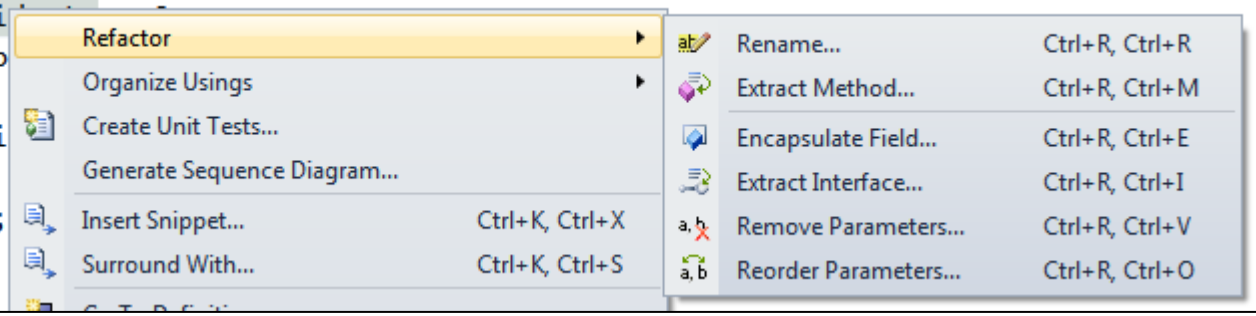
```
public class DecoderPenalties
{
    private float insLogProb = LOG_PROB_ZERO;
    private float
    private float

    public float getInsLogProb()
    {
        return insLogProb;
    }
```

Enter new name, press **Enter** to refactor

```
private int numWi
private double co

public void addWi
{
    numWidgets++;
}
```



"Name carefully- as if your first-born child."

- Intention-revealing names
  - Why does it exist? What does it do? How is it used? What unit is it in?
  - If it requires a comment, keep thinking...

```
int d;    // elapsed time in days
```


```
int elapsedTime;
```

```
int elapsedTimeInMinutes;
```

"Name carefully- as if your first-born child."

- Avoid disinformation

```
HashSet<Account> accountList;

long accountName;

String numWidgets;
```

```
int a = l;
if ( O == l )
   a = O1;
else
   l = 01;
```

```
HashSet<Account> accountGroup;

long accountNumber;

int numWidgets;
```

"Name carefully- as if your first-born child."

- Make meaningful distinctions
  - Avoid noise words that don't add anything
  - Reader should be able to determine difference between similar items

```
int count;
int theCount;
int aCount;

double amountVariable;
String nameString;
Customer custObject;

getActiveAccount();
getActiveAccounts();
getActiveAccountInfo();
```

"Name carefully- as if your first-born child."

- Use pronounceable names
  - "If you can't pronounce it, you can't discuss it without sounding like an idiot"

```
class DtaRcrd102
{
   private Date genymdhms;
   private Date modymdhms;
   private final String pszqint = "102";
}
```

```
class Customer
{
   private Date generationTimestamp;
   private Date modificationTimestamp;
   private final String recordId= "102";
}
```

"Name carefully- as if your first-born child."

- Avoid encodings
  - e.g. Hungarian notation, member prefixes
  - Has become (largely) unnecessary
    - Modern IDEs, strongly typed languages, trend towards small classes and methods

```
boolean bBusy;
int iListSize;
PhoneNumber strPhone;

private int m_iLastItem;
m_iLastItem++;
```

```
boolean isBusy;
int listSize;
PhoneNumber phone;

private int lastItem;
lastItem++;
this.lastItem++;
```

"Name carefully- as if your first-born child."

- Be consistent
  - Pick one word per concept
    - Use fetch, retrieve or get, not all of them
  - If plural, probably should contain multiple things

```
fetchFullPage()
retrieveHeader()
getFooter()

setTemp(double newTemp)
updateTime(double newTime)

double scores;
int [] score;
```

```
fetchFullPage()
fetchHeader()
fetchFooter()

setTemp(double newTemp)
setTime(double newTime)

double sumScores;
int [] scores;
```

"Name carefully- as if your first-born child."

- Avoid gratuitous context
  - Don't prefix every class name in a project
    - Use a namespace instead

```
class MailingAddress
{
   String addrState;
   long   addrZip;
}
```

```
class MailingAddress
{
   String state;
   long   zip;
}
```

```
...
String addrState = "MN";
...
```