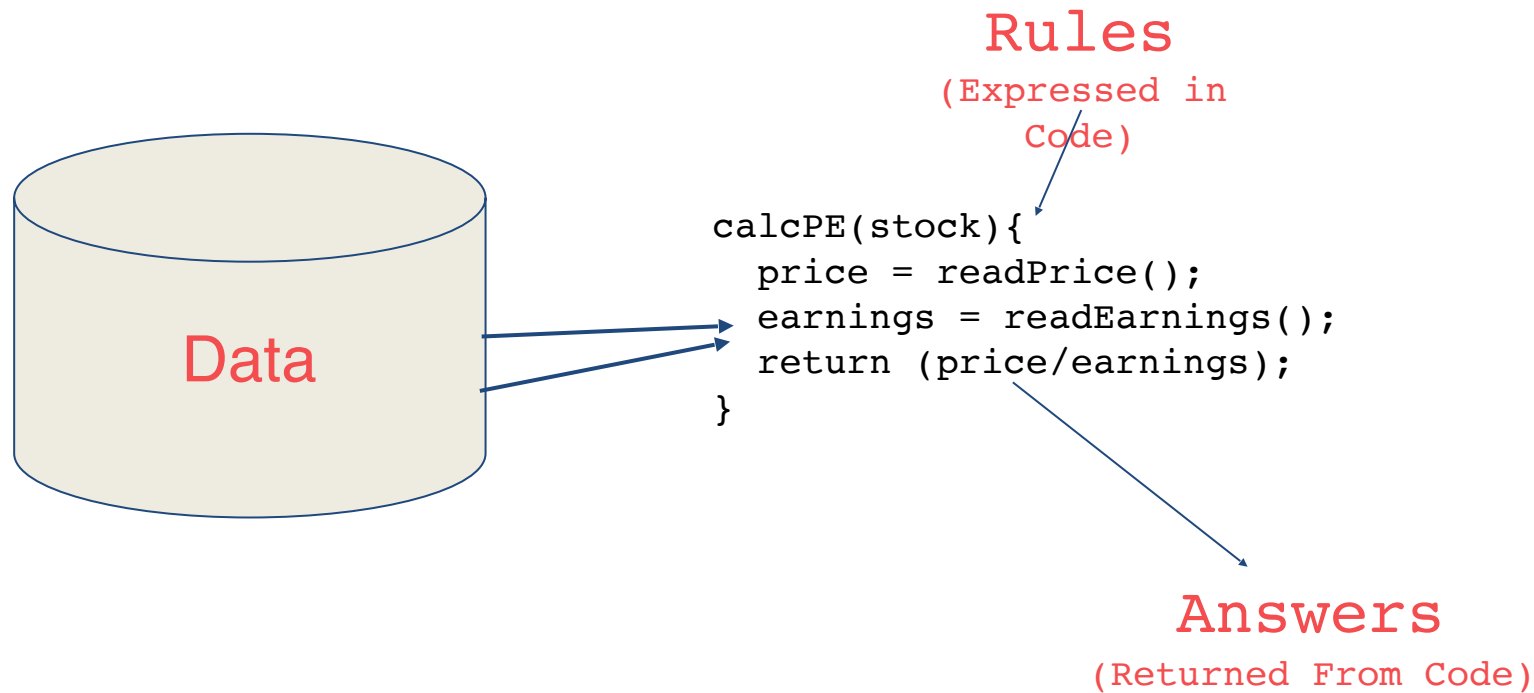


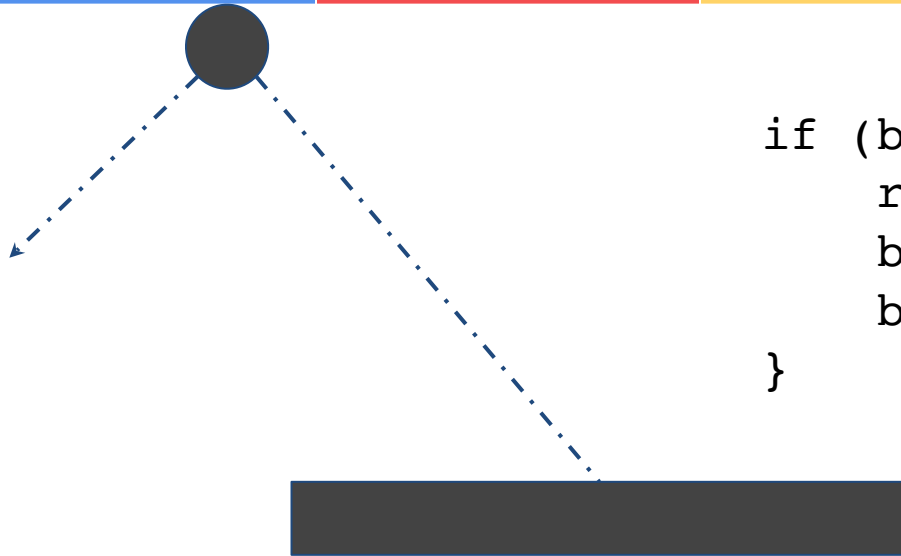
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```
if (ball.collide(brick)){  
    removeBrick();  
    ball.dx=-1*(ball.dx);  
    ball.dy=-1*(ball.dy);  
}
```





# Activity Recognition



```
if (speed < 4) {  
  
    status = WALKING;  
}
```

# Activity Recognition



```
if(speed<4){  
  
status=WALKING;  
}
```



```
if(speed<4){  
  
status=WALKING;  
} else {  
  
status=RUNNING;  
}
```

# Activity Recognition



```
if(speed<4){  
  
status=WALKING;  
}
```



```
if(speed<4){  
  
status=WALKING;  
} else {  
  
status=RUNNING;  
}
```



```
if(speed<4){  
    status=WALKING;  
} else if(speed<12){  
    status=RUNNING;  
} else {  
    status=BIKING;  
}
```



# Activity Recognition



```
if(speed<4){  
  
status=WALKING;  
}
```



```
if(speed<4){  
  
status=WALKING;  
} else {  
  
status=RUNNING;  
}
```



```
if(speed<4){  
    status=WALKING;  
} else if(speed<12){  
    status=RUNNING;  
} else {  
    status=BIKING;  
}
```



```
// Oh crap
```



# Activity Recognition



```
01010010101001010
10100101010100101
11010100101010010
10100101010010101
00101010
Label =
WALKING
```



```
10101001010010101
01010101001001001
00010010011111010
10111110101001001
11101011
Label =
RUNNING
```



```
10010100111110101
01110101011101010
11101010101111010
10101111111100011
11010101
Label = BIKING
```



```
11111111110100111
01001111101011111
01010101110101010
10111010101010101
00111110
Label =
GOLFING (Sort
of)
```

$X = -1, 0, 1, 2, 3, 4$

$Y = -3, -1, 1, 3, 5, 7$

```
model = tf.keras.Sequential([keras.layers.Dense(units=1, input_shape=[1])])
```

```
model.compile(optimizer='sgd', loss='mean_squared_error')
```

```
xs = np.array([-1.0, 0.0, 1.0, 2.0, 3.0, 4.0], dtype=float)
```

```
ys = np.array([-3.0, -1.0, 1.0, 3.0, 5.0, 7.0], dtype=float)
```

```
model.fit(xs, ys, epochs=500)
```

```
print(model.predict([10.0]))
```

```
model = tf.keras.Sequential([keras.layers.Dense(units=1, input_shape=[1])])
```

```
model.compile(optimizer='sgd', loss='mean_squared_error')
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```
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```

```
ys = np.array([-3.0, -1.0, 1.0, 3.0, 5.0, 7.0], dtype=float)
```

```
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print(model.predict([10.0]))
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model.compile(optimizer='sgd', loss='mean_squared_error')
```

```
xs = np.array([-1.0, 0.0, 1.0, 2.0, 3.0, 4.0], dtype=float)  
ys = np.array([-3.0, -1.0, 1.0, 3.0, 5.0, 7.0], dtype=float)
```

```
model.fit(xs, ys, epochs=500)
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```

```
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```
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```

```
model.fit(xs, ys, epochs=500)
```

```
print(model.predict([10.0]))
```

