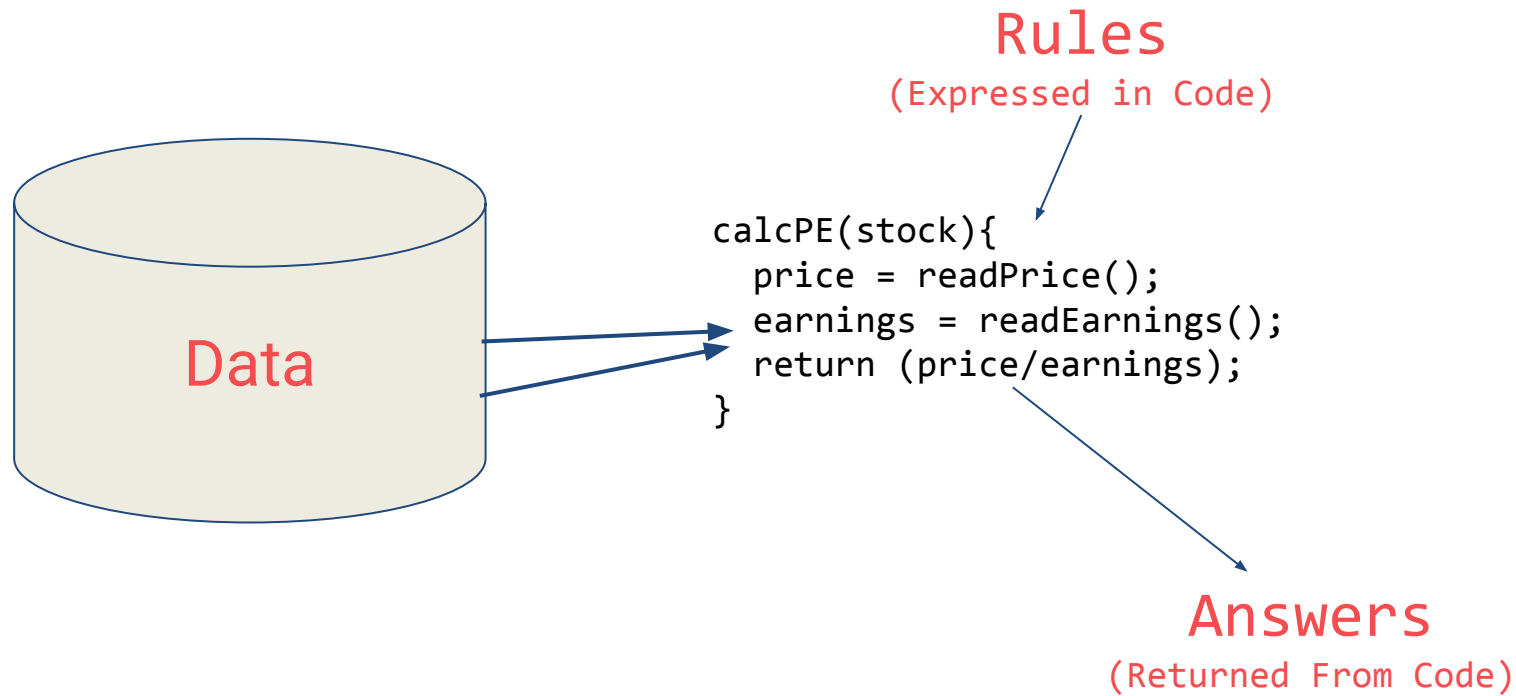


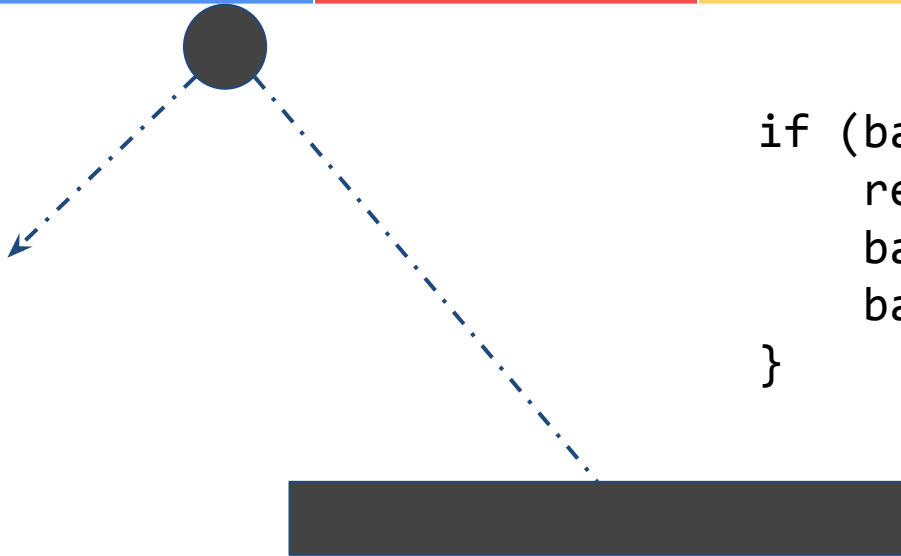
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```
if (ball.collide(brick)){  
    removeBrick();  
    ball.dx=-1*(ball.dx);  
    ball.dy=-1*(ball.dy);  
}
```





# 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



```
0101001010100101010
1001010101001011101
0100101010010101001
0101001010100101010
```

Label = WALKING



```
1010100101001010101
0101010010010010001
0010011111010101111
1010100100111101011
```

Label = RUNNING



```
10010100111111010101
1101010111010101110
1010101111010101011
1111110001111010101
```

Label = BIKING



```
11111111111010011101
0011111010111110101
0101110101010101110
1010101010100111110
```

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')
```

```
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)
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