

# SCOTT LOGIC

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# The Challenge

You have £30,000.

Complete tasks to earn more money.

The team with the highest total cash wins!

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# The Challenge

Money can be earned in 2 steps:

1. Complete coding challenges for extra cash
2. Invest your money in the stock market for a profit

The more money you have to invest, the higher the potential profit.

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# Coding Challenges

Earn extra money to invest in the stock market.

There are 12 questions to complete [here](#).

Each correctly answered question will give you more money to invest.

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# Invest in the Stock Market

Write an algorithm to buy and sell shares in the stock market for profit.

To make a profit:

- Buy stocks at a low price
- Sell stocks at a high price

# Invest in the Stock Market

You will have a simulation of stock prices changing over a year.

At the end of each day, you can buy/sell any number of stocks that you can afford/have.

Write an algorithm to decide how many stocks to buy/sell each day.

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# When to Buy/Sell

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Open	The stock price at the beginning of a day
Close	The stock price at the end of a day
High	The maximum price of the stock during a day
Low	The minimum price of the stock during a day

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# When to Buy/Sell

You can buy/sell stocks at the **close** price.

Possible indicators a stock price is rising:

- The close price is higher than the open
- The difference between the high and low is large

These are just suggestions and are not guarantees!

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# Writing Your Solution

Work in Hackathon/src/trading/TradingStrategy.java

```
public void makeDailyTrade(DailyTrades trades) throws ... {  
    for (DailyInput input : trades.getTrades()) {  
        // Trading strategy here  
    }  
}
```

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# Writing Your Solution

Use DailyInput and TradingManager classes

- DailyInput – Stock price details for a single day
- Trading Manager – Buy/sell stocks

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# Writing Your Solution

DailyInput	TradingManager
getClose()	buyMaxNumberOfShares(DailyInput input)
getCompany()	buyNumberOfShares(DailyInput input, int number)
getDay()	buySharesOfValue(DailyInput input, int value)
getHigh()	getAvailableFunds()
getLow()	sellAllShares(DailyInput input)
getOpen()	sellNumberOfShares(DailyInput input, int number)

Full documentation is available [here](#).

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# Writing Your Solution

Work in Hackathon/src/trading/TradingStrategy.java

```
public void makeDailyTrade(DailyTrades trades) throws ... {  
  
    // Alternate between "buy all" and "sell all"  
    for (DailyInput input : trades.getTrades()) {  
  
        if (input.getDay() % 2 == 0) {  
            tradingManager.buyMaxNumberOfShares(input);  
        } else {  
            tradingManager.sellAllShares(input);  
        }  
    }  
}
```

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# Instructions

Install from instructions on [our GitHub](#)



Eclipse for Java EE

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# Schedule

12:30 Start coding

2:30 Submit answers to coding challenges

2:45 Email trading strategy code

3:00 Judging and prizes

3:15 Pizza time!

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# Submitting Your Solution

Email your TradingStrategy.java and any associated classes to [tkelly@scottlogic.com](mailto:tkelly@scottlogic.com)

Keep any additional classes within the same package as TradingStrategy.

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# Let's Go!

Coding Challenges

<https://hackathon-challenges.azurewebsites.net>

GitHub

<https://github.com/tpkelly/Hackathon>

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