# Challenge 3: Convert Decimal Number to Binary

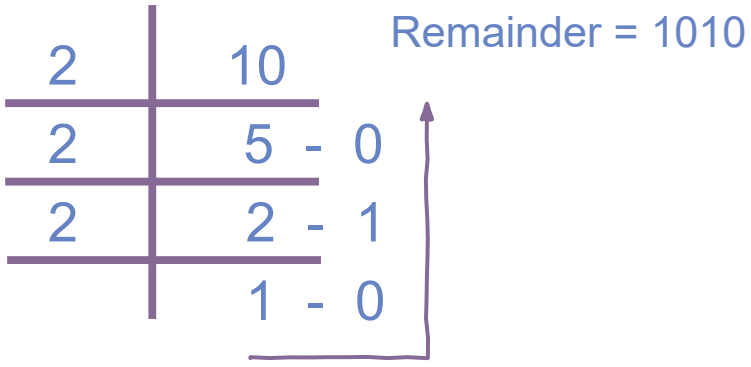
Let's test your problem-solving skills through a difficult challenge.

**We'll cover the following**



## Problem statement #

In this challenge, you are given a decimal number. Your task is to convert it into a binary number. See the figure below:




To convert the decimal number into binary, we should keep dividing the number

by `2` until the quotient is not equal to `0`. The resultant remainder will be the number in binary.

### Input

We have already initialized the input variable `decimal` at the backend.

### Output

We have declared the variable `binary` for you. Your task is to store your output in the `binary`.

### Sample input

```
int decimal = 10;
```

### Sample output

```
binary = 1010
```

## Coding exercise

Before diving directly into the solution, first, try to solve it yourself, and then check if your code passes all the test cases. If you get stuck, you can always see the given solution.

> 📝 Please use the variable `decimal` for the input and `binary` for the output; otherwise, your code will not execute.

Good Luck! 👍

```
/* We have already declared the input variable 'decimal' at the backend.
int decimal;
Convert the decimal number into binary and then
store your output in a variable 'binary'
*/
// Write your code here
int binary = 0;
```

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🎉Congratulations! Give yourself a round of applause.

In case you are stuck, let’s go over the solution review in the next lesson.