



Curtin University

What is Programming?

ISYS5002, School of Marketing and Management

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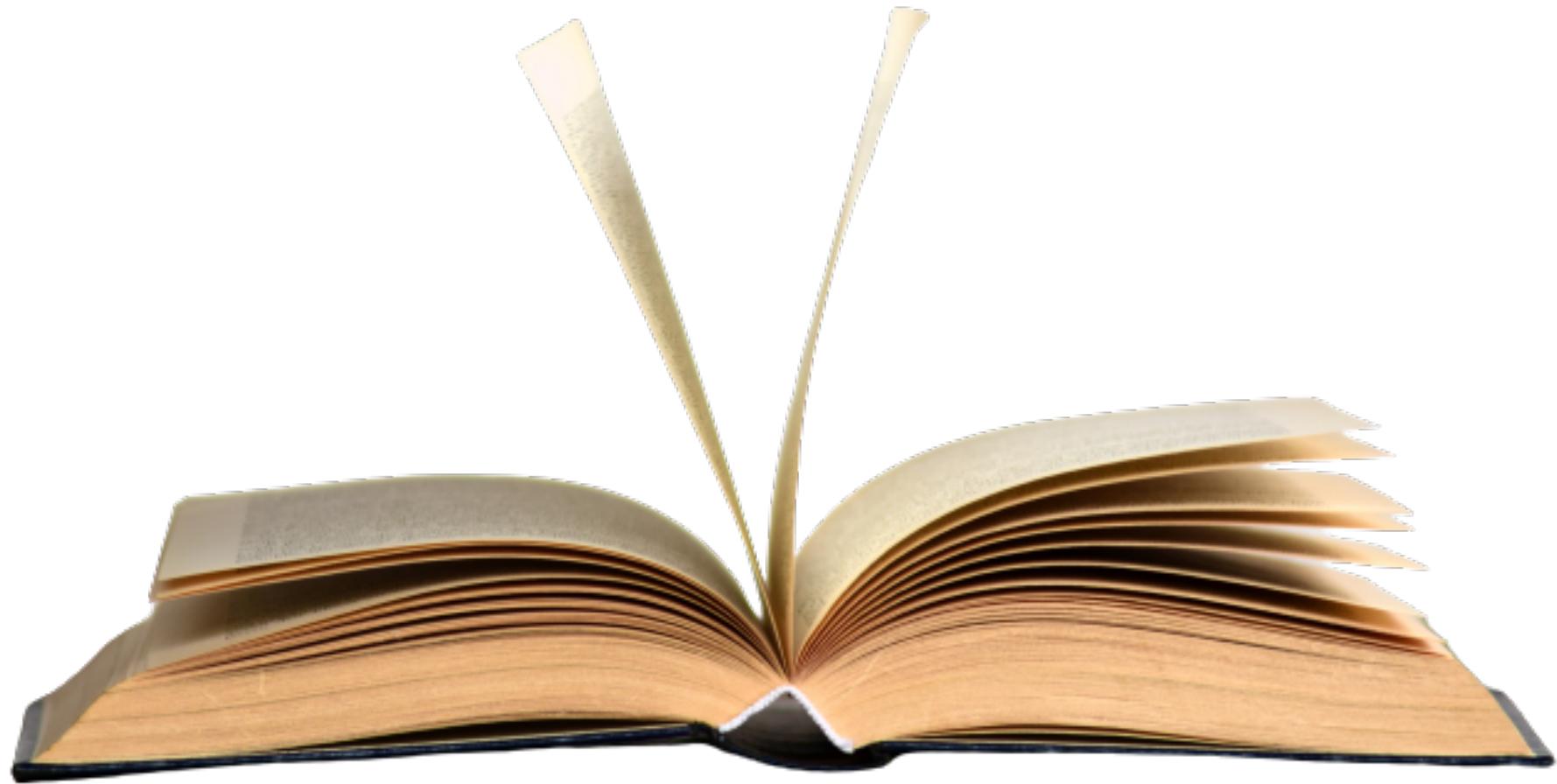
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I acknowledge the traditional custodians of the land on which I work and live, and recognise their continuing connection to land, water and community. I pay respect to elders past, present and emerging.



algorithms



Is this algorithm, turning the pages, step by step, looking for the definition of “Programming” correct?



Instead of looking for the definition one page at a time, lets do two, four, six, eight, pages at a time. Is it faster. Is this algorithm correct?



Pseudocode

The following example is inspired from Harvard's CS50x OpenCourseWare, see
<https://cs50.harvard.edu/x/2021/weeks/0/>

Pseudocode

```
Pick up dictionary  
Open to middle of dictionary  
Look at page  
If word is on page  
    Read definition  
Else if word is earlier in book  
    Open to middle of left half of book  
    Go back to line 3  
Else if word is later in book  
    Open to middle of right half of book  
    Go back to line 3  
Else  
    Quit
```

Functions

Pick up dictionary

Open to middle of dictionary

Look at page

If word is on page

Read definition

Else if word is earlier in book

Open to middle of left half of book

Go back to line 3

Else if word is later in book

Open to middle of right half of book

Go back to line 3

Else

Quit

Selection

Pick up dictionary

Open to middle of dictionary

Look at page

If word is on page

 read definition

Else if word is earlier in book

 Open to middle of left half of book

 Go back to line 3

Else if word is later in book

 Open to middle of right half of book

 Go back to line 3

Else

 Quit

Boolean Expressions

Pick up dictionary

Open to middle of dictionary

Look at page

If **word is on page**

 read definition

Else if **word is earlier in book**

 Open to middle of left half of book

 Go back to line 3

Else if **word is later in book**

 Open to middle of right half of book

 Go back to line 3

Else

 Quit

Loops

Pick up dictionary

Open to middle of dictionary

Look at page

If word is on page

 read definition

Else if word is earlier in book

 Open to middle of left half of book

Go back to line 3

Else if word is later in book

 Open to middle of right half of book

Go back to line 3

Else

 Quit

Fundamentals

- Functions
- Conditions
- Boolean expressions
- Loops