Please fill out the survey so I can tell how fast to go over the content! (link in the emails)

Week 2!

T15B 24T2

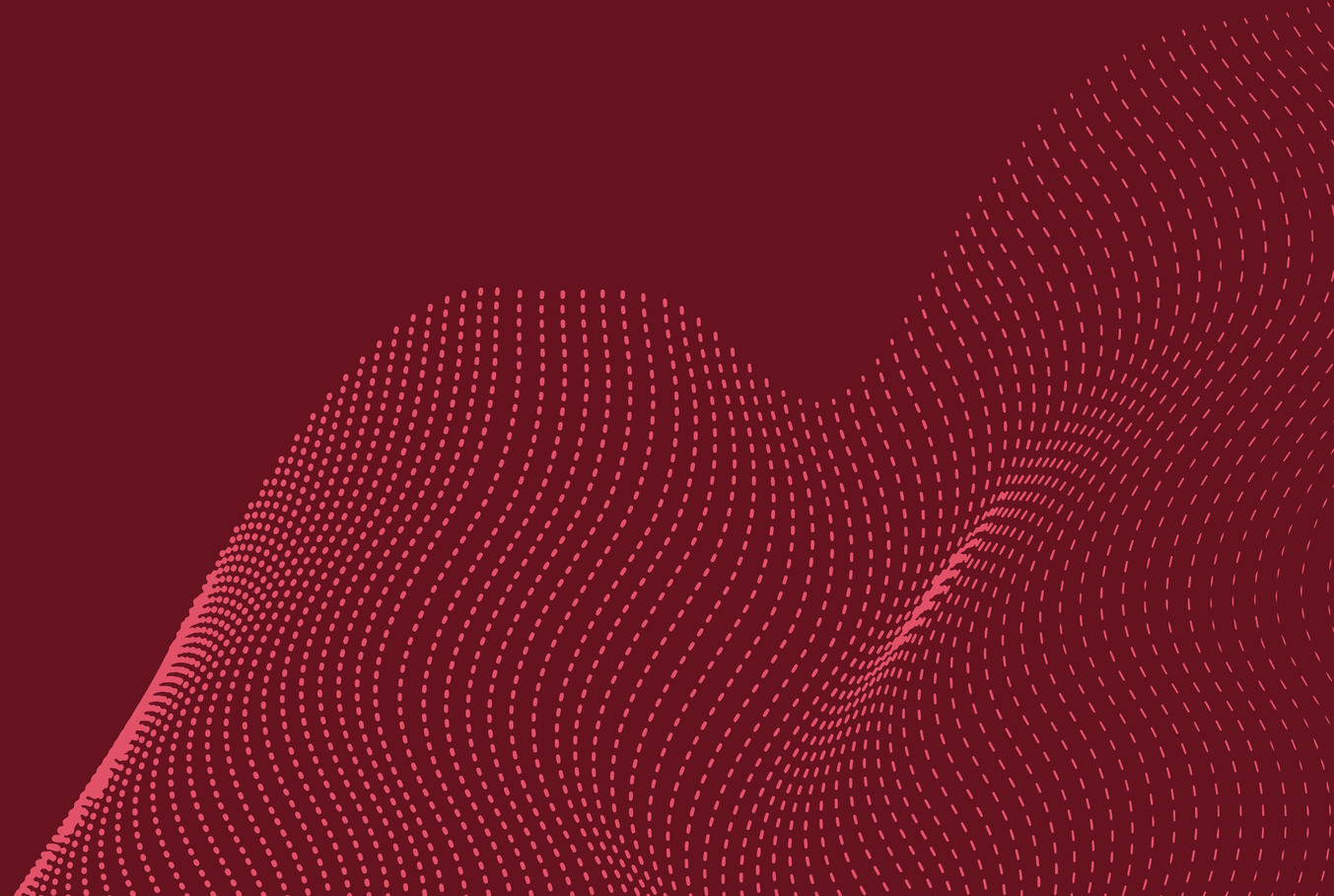
Overview

Variables & Constants

Calculating Values in Programs

Diagramming

Practical Programming Exercise



Variables

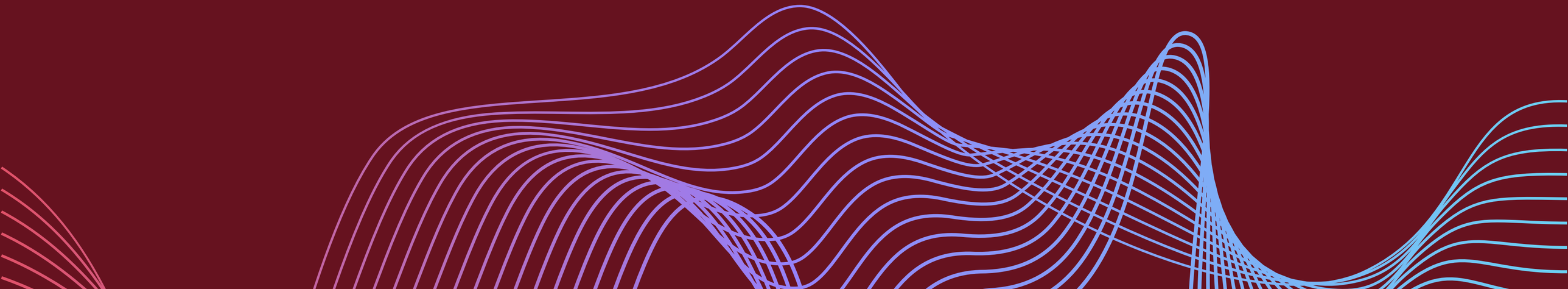
What data types have we seen so far? int char double

How do we declare a variable? data_type variable_name;

How do we initialise variables? variable_name = value;

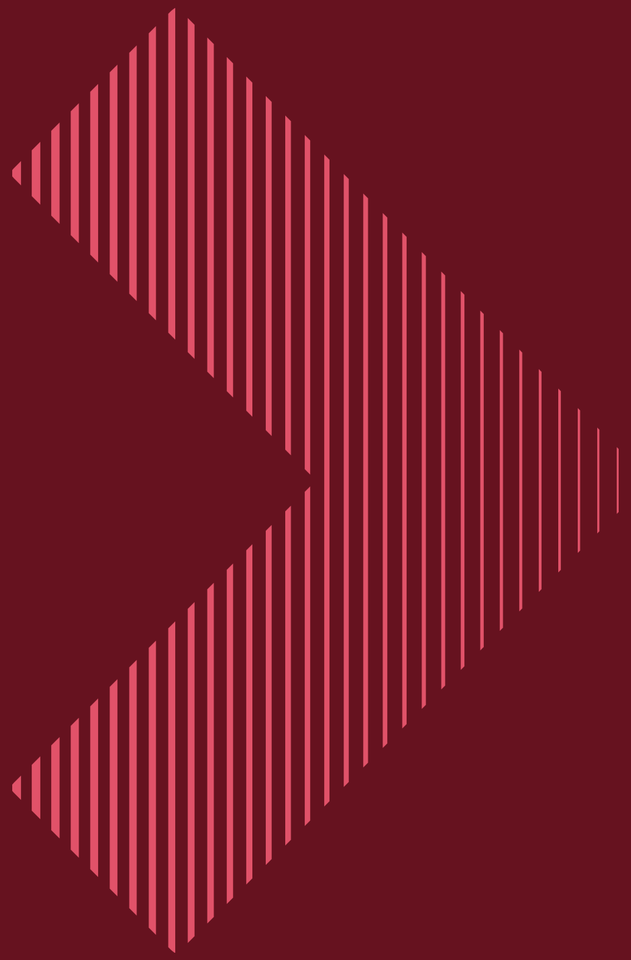
How do we print the value of variables? using printf(...); from <stdio.h>

see tut code for a full solution



Constants

See tut code for a full solution!



Calculating Values in Problems

In your groups: Write down as many operators of your allocated type as you can

Group 1: Arithmetic

Group 2: Logic

Group 3: Comparison

Operators

Arithmetic	+ - * / %
Logic	&& || !
Comparison	< > <= >= != ==

Operators

Arithmetic	+ - * / % ++ -- += -= *= /= %=
Logic	&& || !
Comparison	< > <= >= != ==

Operators

Arithmetic	+ - * / % ++ -- += -= *= /= %=
Logic	&& || !
Comparison	< > <= >= != ==
Bitwise	& | ^ << >> ~
Ternary expressions	cond ? if_true : if_false

Weird Data Types and Arithmetic

What types of storage have we seen so far?

double

int

char

Reminder

integer / integer == integer

char + integer == char

Exercise

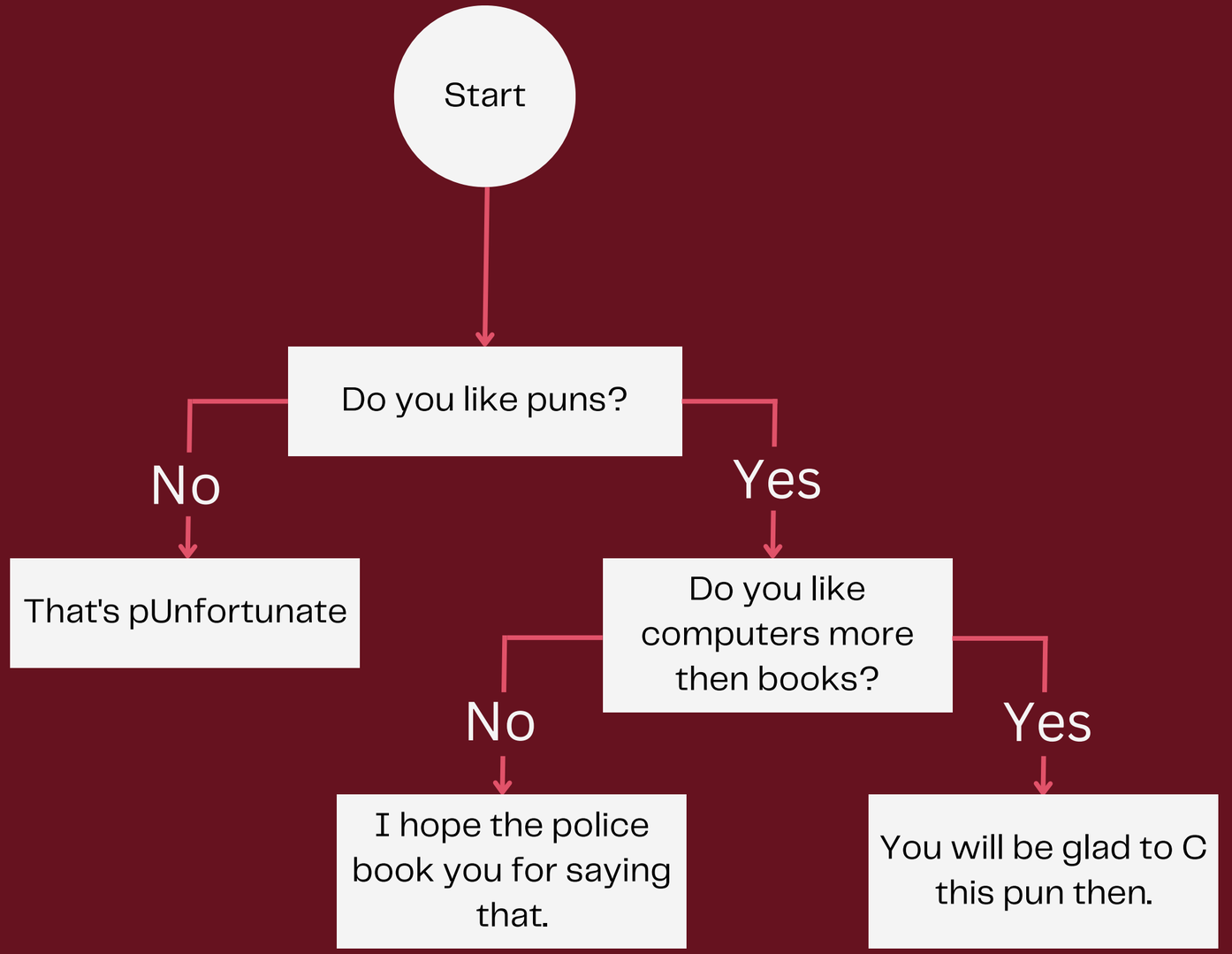
Group 1: (7 / 2)

Group 2: (3.0 / 2) + 1

Group 3: 'a' + 5

Group 4: 'F' – 'A' + 'a'

Diagramming!

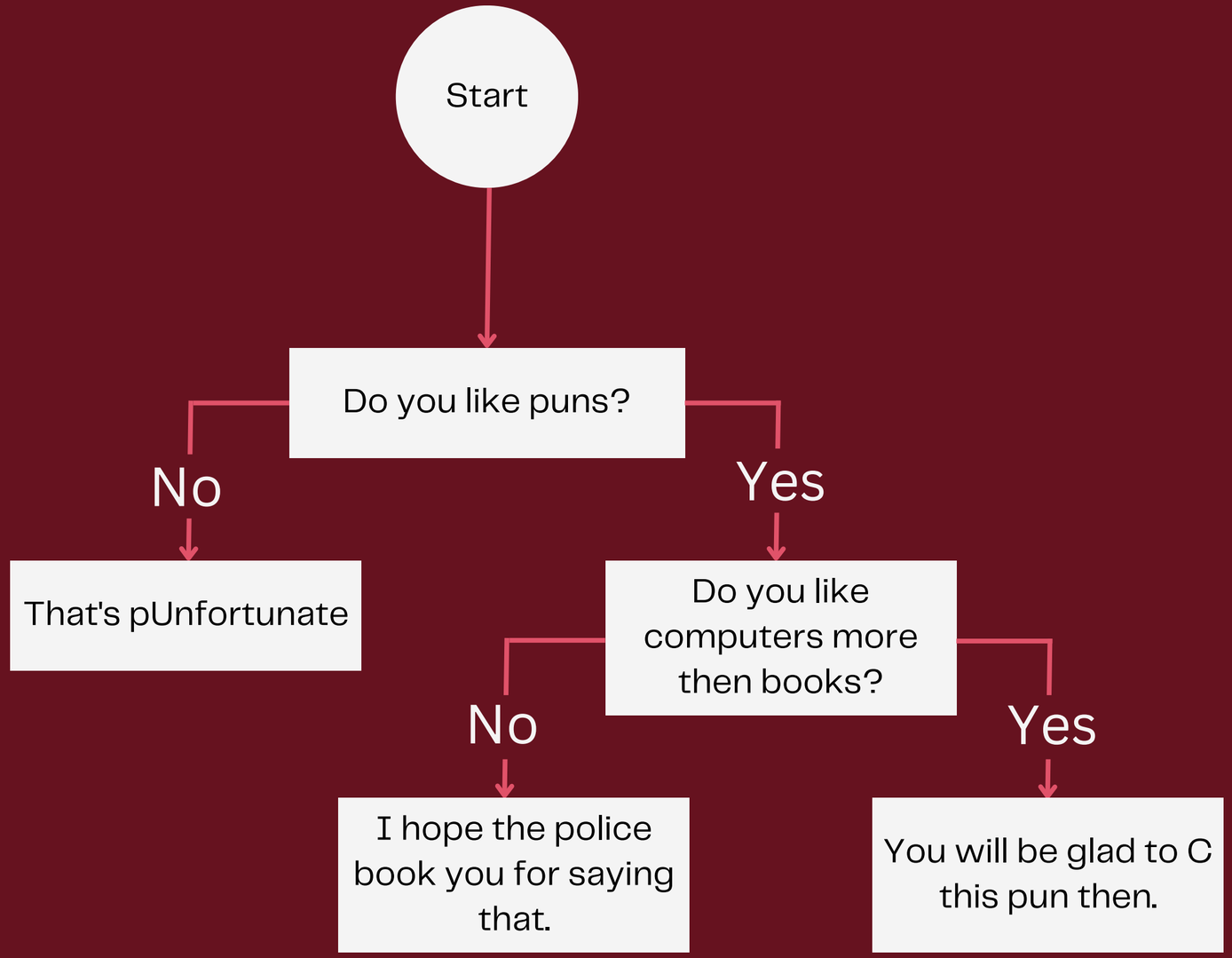


Parts of the flow chart

Circle – Start of the diagram

Boxes – Question/decision

Arrows – Answer to the previous question, directs you to the next question or result



Practical Programming Exercise

The program should:

1. Scan in the users height.
2. If the height is 0 or less, it should print an error message,
3. If the height is below the minimum height, it should print a message telling the user they are not tall enough to ride,
4. If the hight is above the minimum but below the ride alone threshold, it should print a message telling the user they can ride with an adult,
5. If the height is or is above the ride alone threshold, it should print a message telling the user they can ride.

Questions

Lab Time