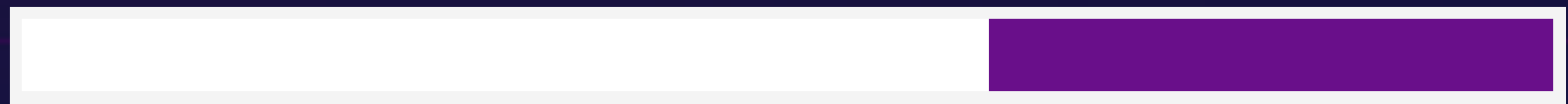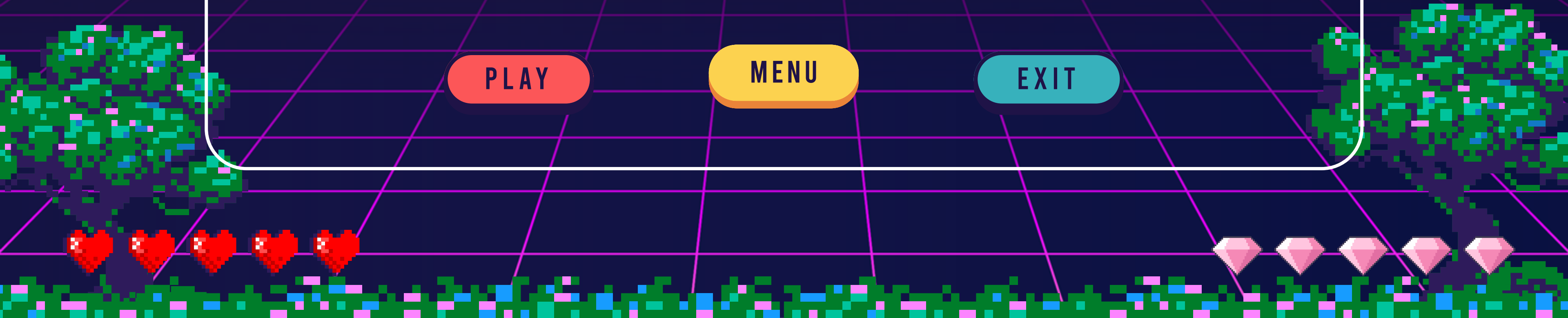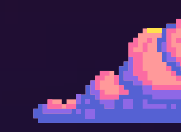# PYTHON

PLAY   MENU   EXIT

GETTING STARTED

EXIT

OBJECTIVES

- An introduction.

- Interpret a program in Python that contains **input/output** statements, a **function definition** and an **import module** statement.

- A walk through of Visual Studio Code IDE.

- A walk through of GitHub and expected behaviour during coding lessons.

- Write and run your first program in Python.

INTRODUCTION

We need to feed computer systems _____ to perform different tasks.

An algorithm is a list of step-by-step _____ to solve a problem.

We can write algorithms using a programming language like _____ .

ALGORITHMS

INSTRUCTIONS

INPUT

PYTHON

INTRODUCTION

Python is a _____ programming language that has a _____.

A program written in Python is made up of _____ and symbols.

Python is a very popular programming language for building cool video games.

TEXT-BASED   SYNTAX   WORDS   CODE BLOCKS

WHAT DOES THIS DO?

```
print("* Welcome to my game *")
```

BUILT-IN FUNCTION

Most used algorithms come out of the box in the Python installation.

INPUT

OUTPUT

LOOP

WHAT DOES THIS DO?

```
input("Enter your name...")
```

BUILT-IN FUNCTION

INPUT

OUTPUT

LOOP

WHAT DOES THIS DO?

```
if a == 2:
    print("Hi there")
else:
    print("Bye bye, see you later")
```

INDENTS

When nesting code add exactly 4 spaces.

CONDITION

INPUT

LOOP

WHAT DOES THIS DO?

```
import pgzrun
# more code here...
```

MODULES

We can separately install separate modules in our project to make coding easier

VARIABLE DECLARATION

ARITHMETIC

IMPORT CODE BUNDLE

WHAT DOES THIS DO?

```
import pgzrun

def draw():
    screen.draw.text("Hello")
```

FUNCTION

We can organise our code in function blocks which we declare at the top underneath our imports

INDENTS

FUNCTION DECLARATION

CONDITION

INPUT PROMPT

MEET OUR IDE

- An **integrated development environment** or **IDE** is a software application that helps programmers develop software code efficiently.

- Watch the video and then listen to the instructions very carefully to open Visual Studio Code.

WATCH

01 INPUT AND OUTPUT

Input and _____ statements in Python will feature regularly in our programs.

Python gives us shortcuts called _____ that we can use immediately.

For output we will use the **print()** and for input we will use the _____.

OUTPUT   SYNTAX   FUNCTIONS   INPUT()

01 PRINT() FUNCTION

```python
# output a piece of text on to the console
print("This text will be displayed or outputted.")
```

HOW TO USE

When we build programs with a textual interface we need to use this function to output messages to the user. For example, when we output a result or maybe an error.

01 PRINT() FUNCTION

```python
# you can print multiple elements in sequence
print("Hi", 5, "there!")
```

MANY FEATURES

Built-in functions in python are rich in features and super flexible. There is so much more to the print() than we let on here. However we will stick to the basics for now.

01 INPUT() FUNCTION

```python
# asks the user to type in their name
name = input("What is your name?")
```

HOW TO USE

When we build programs with a textual interface we need to use this function to ask the user to type in a value from the keyboard. The value the user types in is stored in **name**.
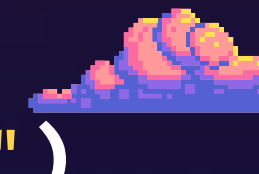
DID YOU UNDERSTAND?

COMPLETE THE PROGRAM

Write a program that asks the user how old he is. As output the program will display back a message together with the value inputted.

```
# asks the user to type in their name
age = _____("What is your name?")

# output the message back
_____("You are", _____, "!")
```

print   age   input

LESSON CHALLENGE

- Every lesson will be a task on **GitHub** and you would need to obey instructions to complete a task.

- A lesson will always start with some information so that you do not jump right in blind.

- **Find your first task!**