# HAMPSTEAD SCHOOL
## Learning together Achieving together

# Y12 – Y13

# Summer Bridging Tasks

# 2023

# COMPUTER SCIENCE

Name: _____

- You should spend some time during the summer holidays working on the activities in this booklet.
- You will be required to hand in this booklet in your first lesson at the start of Year 13 and the content will be used to form the basis of your first assessments.
- You should try your best and show commitment to your studies.
- We are really looking forward to you coming to Hampstead School Sixth Form and studying Computer Science

# A-Level Computer Science Bridging Work
## Year 12 → Year 13

## Non-Exam Assessment

Over the Summer Term you have completed a first draft of the Analysis & Design sections of the coursework. You will receive feedback on both of these sections before the end of term, your first task is to improve on your first drafts of these two sections.

These will need to be uploaded to Teams on the first day back after the Summer holidays.

Please find the support documents, checklists and mark schemes on Teams. Your feedback will be uploaded to Teams and emailed to you.

In addition to this, over the Summer holidays you need to start coding your project and doing practice into programming techniques you may need.

## Paper 1 & Paper 2

You will need to produce revision documents for each of the topics that you have covered this academic year.

These documents should be a **one page** summary sheet that contains all of the information needed, this can be done in any format, some examples could be:

- A mind map
- Cornell note taking
- Sectioned off areas for different sub-topics.
- Poster

You will need to produce these for the underlined topics, the bullet points below are sub-topics:

- 1.1 – Computer Systems
    - Structure and function of a processor
    - Types of processors
    - Input, output & storage
- 1.2 – Software & Software Development
    - Operating Systems
    - Applications generation (open source v closed source, translators & utilities)
    - Software Development
    - Assembly language
- 1.3 – Exchanging Data
    - Databases
    - Networks
    - HTML, CSS & JavaScript

- 1.4 – <u>Data Types</u>
  - Data Types (Binary, Hex etc…)
  - Boolean Algebra
- 1.5 – <u>Issues</u>
  - Legislation & ethical issues
- 2.1 – <u>Computational Thinking</u>
  - Abstraction, Decomposition
- 2.2 – <u>Programming Techniques</u>
  - Programming Constructs
  - Data Structures
  - IDE
  - Programming Techniques
- 2.3 – <u>Algorithms</u>
  - Searching algorithms
  - Sorting algorithms
  - Big O

These will be presented to class in the first week back.