



Flying Start
A-level Computer Science

Name:



Welcome to Computer Science!

Please arrange and ensure that you have the following at home:

1. A folder with dividers

An A4 ring binder with labelled A4 dividers would be ideal. The topics for the course are as follows:

Unit 1

Unit 2

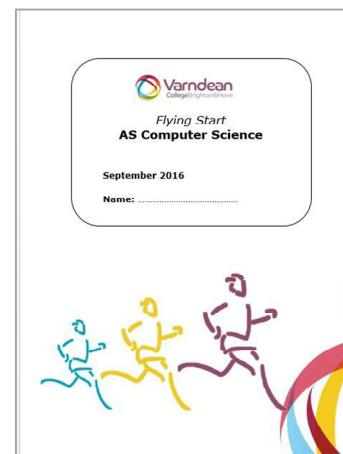


- 2. A computer / laptop** – Please organise a computer before September (it doesn't have to be anything special) – You will need it for homework tasks and online learning weeks. Programming is like a musical instrument, if you don't practice regularly outside of College, you will become rusty. You will be set programming tasks as part of this course.

Please bring the following to our first lesson.

3. This Flying Start workbook with all activities below attempted.

I would like you collect in your Programming evidence digitally, please email your work to twb@varndean.ac.uk



Visual Studio

Programming is a huge part of the course and if you have never programmed before you will need to get up to speed very quickly.

We are going to start with VB.NET using Visual Studio - we need to be creating Graphical User Interfaces, and this IDE makes it very straight forward.

If you have programmed before you may not have used VB but I think that you will find it similar. I would still like you to start at the beginning, but you can skip to the extension if you are confident.

Task:

Please download Visual Studio Community for free from:
<https://www.visualstudio.com/downloads/>

1. VB.NET Intro - [2-3 hrs approx]

Open the VB companion from: tinyurl.com/VBCompanion

Read and complete the following tasks:

Objective 1: Understand how to output text strings

- a) Practice the tasks
- b) Complete the Visual Dice Challenge on Page 5
- c) Save print-screen evidence in Word/PowerPoint to hand-in in September showing the code, and the program running.

Objective 2: Variables

- a) Practice the tasks
- b) Complete 2 challenges from Page 8
- c) Save print-screen evidence in Word/PowerPoint to hand-in in September showing the code, and the program running.

Objective 3: Understand String Manipulation functions

- a) Practice the tasks
- b) Complete 2 challenges from Page 14 or 15
- c) Save print-screen evidence in Word/PowerPoint to hand-in in September showing the code, and the program running.

2. GUI Form programming [2-3 hrs approx] -

We normally do this one at college, but due to the later start I thought that you could try before our first lesson – if you get stuck don't worry, you can [email me](#) or wait until our first lesson.

Open the Introduction to Form programming tinyurl.com/introToVBForm and give all the tasks a try. Please add screenshots to your evidence document

3. All too easy? [45 minutes approx] Try this optional extension for those who are confident programmers...

Challenge

Write a program to work out how many days you have lived for.

Algorithm

Enter date of birth

Get today's date

Get the difference in days between the two dates Display result

Extension

Work out how many seconds you've lived for.

If the date given is in the future – Give a message saying that “The date cannot be in the future”

Hints

Use Date.Now to get today's date

Use the date type for a variable to store your date of birth

Use the datediff function to get the difference between two days

Prior Knowledge Needed

How to create variables

How to input data into a variable

How to display variables

How to use system functions.

How to use system variables