

```
import java.sql.*;
import java.awt.*;

/**
 * @author Jeff
 */
public class Main {

    public static String AppName = "SQL Mail";
    public static String AppVersion = " 0.0.1 ";
    public static String AppAuthor = "Jeffrey Cobb";
    public static String AppDate = "August 8th, 2007";
    public static String AppPath = System.getProperty("user.dir");
    public static String AppDriver = "smallsql.database.SS0river";
    public static String AppDBHeader = "small";
    public static String AppPath = System.getProperty("user.dir");
    public static String AppPreferences = AppPath + "\\mail";
    /** Creates a new instance of Main */
    public Main() {
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    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) throws Exception {
        // TODO code application logic here

        boolean bDBConnect = false;
        int result = 0;
        frmMain SQLMailForm = new frmMain();
        System.out.println("\r\n" + AppName + "\r\nVersion" + AppVersion + "\r\nAuthor: " + AppAuthor +
        .. " + AppDate + "\r\n");

        Toolkit tk = Toolkit.getDefaultToolkit();
        Dimension screen = tk.getScreenSize();
        System.out.println(screen.getWidth() + " --- " + screen.getHeight());
    }
}
```



COMPUTER SCIENCE

GCSE

(OCR J277)





What is Computer Science?

Computer science is the study of algorithmic processes, computational machines and computation itself. As a discipline, computer science spans a range of topics from theoretical studies of algorithms, computation and information to the practical issues of implementing computational systems in hardware and software.

[wikipedia 2021]

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Without computer science where would we be?

So much of the world we know is governed and supported by technology and it is in the realm of computer scientists to to design, support and manage these technologies.

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public static
public static
/** Creates a
public Main()
)

/**
 * @param args
 */
public static
// TODO co

boolean b0
int result
frmMain 50
System.out
.. * + AppDate +

Toolkit tk
Dimension
System.out
```



DID YOU KNOW ?

2019

patrick.winter@universityofutexas.edu

This video is a from 2019 telling students how important computer science and coding is, as technology has moved on it has become even more important. This video is co presented by many famous people including Will.i.am, Mark Zuckerberg, and Chris Bosh



Without computer science where would we be?

This video shows the extent of technology in 2019 - since then we have a global pandemic which has seen an almost exponential growth in the use of technology for work, research and education.

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import java.awt.*;
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boolean b0
int result
frmMain f0
System.out
.. * + AppDate +

Toolkit tk
Dimension
System.out
```



The GCSE

At Holcombe we follow the OCR Computer Science GCSE we chose this specification as it flows nicely from the KS3 computing and ICT subject content and into A-level and eventual University Degrees or the World of Work.

Computer Science is a very practical subject – you will be able to use the knowledge and skills you learn in the classroom on real-world problems. It's also a highly creative subject that calls on you to be inventive.

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public class Main {

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    public static String AppAuthor = "Jeffrey Cobb";
    public static String AppDate = "August 8th, 2007";
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    public static String AppDriver = "smallsql.database.SS0river";
    public static String AppDBHeader = "jdbc:smallsql:";
    public static String AppDBPath = AppPath + "/sqlmail";
    public static String AppPreferences = AppPath + "/sqlmail_prefs";
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    public Main() {
    }

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) throws Exception {
        // TODO code application logic here

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        int result = 0;
        frmMain SQLMailForm = new frmMain();
        System.out.println("\r\n" + AppName + "\r\nVersion" + AppVersion + "\r\nAuthor: " + AppAuthor +
        .. " + AppDate + "\r\n");

        Toolkit tk = Toolkit.getDefaultToolkit();
        Dimension screen = tk.getScreenSize();
        System.out.println(screen.getWidth() + " --- " + screen.getHeight());
    }
}

```



The Course Structure

COMPUTER SYSTEMS (50% Written Exam)

Study how processors work, Investigate computer memory and storage. Explore modern network layouts and how they function. Build skills in the ever important realm of cyber security. Investigate how types of software are used within computer systems. Stretch wider comprehension of how computers and computing affect ethical, legal, cultural and environmental issues.

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    }
}
```




The Course Structure

COMPUTATIONAL THINKING, ALGORITHMS AND PROGRAMMING (50% Written Exam)

Study fundamental algorithms in computer science, Build a firm foundation in programming techniques, Produce programs through diagrams. Thoroughly test programs and make them resistant to misuse, Explore Boolean algebra (AND, OR, NOT). Understand how we store data within computers in binary form.

```
import java.sql.*;
import java.awt.*;

/**
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 */
public class Main {

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    }
}
```

The Course Structure

A PROGRAMMING PROJECT

Use new-found programming skills on an independent coding project by solving a real-world problem. Students will spend 20 classroom hours engaging with the Programming Project.



What will you GAIN from the course?

Valuable thinking and programming skills that are extremely attractive in the modern workplace. A deep understanding of problem solving and experience in creating logical and efficient solutions. Ability to write down solutions to problems for other people to understand. A good grounding in mainstream computing theory and understanding.

```
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    }
}
```



Where to NEXT with Computer Science?

There are many pathways due to the logical skills that are developed by the course. We would naturally recommend that you consider doing an A-level in the subject if you enjoyed the GCSE and then, like many of our students move on to study Computer Science (or a related discipline) at university or move into the world of work either directly or via the apprenticeship route.

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        Dimension screen = tk.getScreenSize();
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    }
}
```



EXAMPLE QUESTIONS

The computer has 1GB of storage free.

Calculate the number of videos that could be stored on the computer if each video was 100MB in size.

Show your working.

.....
.....
..... [2]

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import java.awt.*;

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EXAMPLE QUESTIONS

The following table has descriptions of Ethernet and WiFi.

Tick (✓) **one** box in each row to identify if the description is more appropriate for Ethernet or WiFi.

Description	Ethernet	WiFi
A wired connection		
More likely to be affected by interference		
Data can be transmitted at a faster speed		
Wireless transmission		
Shorter transmission range before data is lost		

[5]

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import java.awt.*;

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    }
}
```



EXAMPLE QUESTIONS

The CPU has a clock speed of 3.8 GHz.

Describe what is meant by a clock speed of 3.8 GHz.

.....

.....

.....

..... [2]

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import java.awt.*;

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EXAMPLE QUESTIONS

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```

The logic diagram below (Fig. 2) shows a system made up of two connected logic gates.

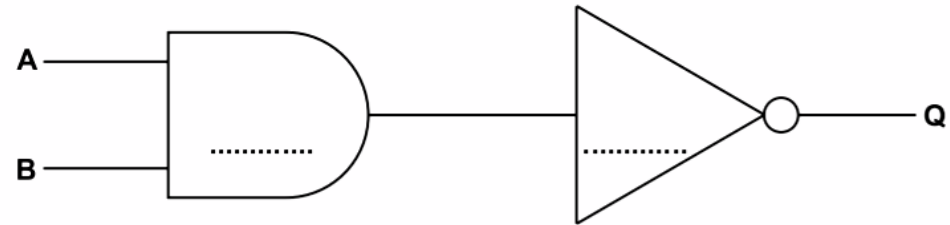


Fig. 2

Label the names of the two gates on the diagram above.

[2]



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        System.out.println(screen.getWidth() + " --- " + screen.getHeight());
    }
}
```

FURTHER INFORMATION

If you want to find out more about computer science GCSE please ask your computer science teacher at the end of one of your computer science lessons or email.

Mr Fielding:

michael.fielding@holcombegrammar.tsat.uk

(Head of Faculty, Deputy Head of Sixth Form, Careers Lead)

Miss Lee:

jennifer.lee@holcombegrammar.tsat.uk

(Teacher of Computer Science, Head of Year 11)

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import java.awt.*;

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public static
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public static
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public static
public static
public static
/** Creates a
public Main()
)

/**
 * @param args
 */
public static
// TODO co

boolean b0
int result
frmMain f0
System.out
.. * + AppDate +

Toolkit tk
Dimension
System.out
```

