

- 1(a) Bourn Progress Streaming is developing an application for streaming films. The films will be streamed by users on a range of devices including Smartphones and Smart TVs. They will call the application BournStreaming.

What is an application?

[1]

- (b) What **type** of application is the BournStreaming application?

[1]

- 2 Identify **two** characteristics of an Open Operating System (OS).

1 .

2 .

[2]

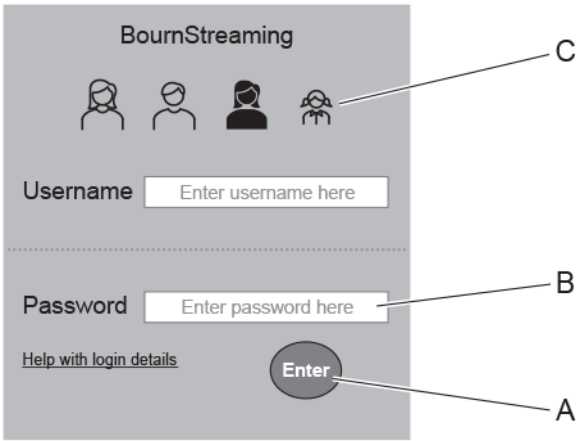
Explain **two** characteristics of a Smart TV that make it suitable for use with the BournStreaming application.

1 .

2

[4]

(b) A visualisation diagram of the BournStreaming login screen is shown below.



i. Complete the table below using the letters (A–C) from the visualisation diagram.

Component	Letter
Image	
Call to action	
Help message	

[3]

ii. What type of visual interaction is used for the login screen?

[1]

iii. Identify **two** other types of user interaction that could be used with the login screen.

1 -----

2 -----

[2]

4(a) When planning the development of a new streaming application Bourn Progress Streaming researched different software development models.

Explain **two** disadvantages of using the Waterfall software development model.

1

2

[4]

(b) Identify and explain **one** iterative software development model suitable for use when developing the new streaming application.

Iterative model

Explanation

[3]

5 Complete the table to match the tasks to the correct phase of the software development model.

Write the name of **one** phase in each of the spaces on the table.

Phases:

Planning

Design

Construction/ creation

Implementation

Documentation creation

Task	Phase
Feasibility study	
Quality assurance	
Wireframe creation	

[3]

6(a) During the development of an application a Data Flow Diagram (DFD) is sometimes used.

Identify **one** component of a DFD.

.....

[1]

(b) Explain why it is appropriate to use a DFD during the development of the application.

.....
.....
.....
.....

[2]

7(a) Bourn Progress Streaming is developing an application for streaming films. The films will be streamed by users on a range of devices including Smartphones and Smart TVs. They will call the application BournStreaming.

The development of the application for Bourn Progress Streaming needs to be planned.

(b) Identify and explain **one** planning consideration that could impact the development of the new streaming application.

Planning consideration _____

Explanation _____

[3]

8(a) Bourn Progress Streaming is developing an application for streaming films. The films will be streamed by users on a range of devices including Smartphones and Smart TVs. They will call the application BournStreaming.

Bourn Progress Streaming has employed a number of staff to develop the new streaming application.

Describe **one** responsibility of a Systems Designer.

[2]

(b) Describe **one** responsibility of a Project Manager.

[2]

(c) In a meeting Bourn Progress Streaming provided the staff with their requirements for the new streaming application.

Describe **two other** methods of gathering client requirements.

1 .-----

2 .-----

[4]

9(a) Bourn Progress Streaming is developing an application for streaming films. The films will be streamed by users on a range of devices including Smartphones and Smart TVs. They will call the application BournStreaming.

The BournStreaming application must allow users to register, log in and manage their account.

The application must support on-demand streaming of films, with content organised by genre, language and popularity to enhance user navigation. The application should also include the ability to create multiple user profiles under a single account, along with integrated parental control features for child-safe viewing.

The application should support at least one million simultaneous users and stream content in high definition (HD) with the resolution changing based on a user's internet connection. The platform must maintain a reliability of 99.9% uptime over a 30-day period. The system must comply with the Data Protection Act (DPA).

The development team is encouraged to use open application software wherever possible. The full project should be delivered within six months, with progress reviewed through monthly demonstration milestones to ensure the application is meeting Bourn Progress Streaming's expectations.

Explain **two** non-functional requirements, other than the use of open application software, for the new streaming application.

1

2

[4]

(b) Identify **one** client defined requirement from the brief.

[1]

(c) Analyse the advantages and disadvantages of using open application software to create the new streaming application.

[6]

(d) Describe **one** advantage of bespoke software.

[2]

END OF QUESTION PAPER