



1.3.4 Client-side vs Server-side Processing

1. A movie website lets users submit reviews and give a movie a score out of 10.

When a score is entered on the website it is checked in the browser to ensure that it is between 0 and 10. It is then checked again on the server.

- a) State what is meant by the term 'server'.

[1 mark]

- A device which provides a central point of control/access

2. A booking site for a music festival uses JavaScript to show users the booking fee. When users click to buy the tickets, the booking fee is calculated again on the server.

- a) Explain why server side processing is used to recalculate the booking fee.

[3 marks]

- Client-side processing can be modified
- The browser may not support client-side language / scripting can be disabled
- To make sure the booking fee calculation is correct

- b) Explain **one** advantage of client side processing to either the customer buying the tickets, or to the company who owns the website.

[2 marks]

- No need to submit to the server and wait for a response
- ... Website will work more quickly for the user
- Reduces load on the server
- ... Will need to spend less on processing power/bandwidth





3. A website contains the line `<form action="checkUser.php">` which send the contents of the form to be processed by the server. This line is written in a language called PHP which is designed for server side processing. Conversely JavaScript is traditionally used for client side processing.

Discuss the difference between server and client side processing with respect to webpages. You should refer to the advantages, drawbacks and best uses of both approaches.

[9 marks]

Knowledge

- **Server side processing takes place on the webserver. Data is sent from the browser to the server, the server processes it and sends the output back to the browser.**
- **Client side processing takes place in the web browser.**

Application

- **Client side processing doesn't require data to be sent back and forth meaning code is much more responsive.**
- **Code is visible which means it can be copied. The browser may not run the code either because it doesn't have the capability or because the user has intentionally disabled client side code.**
- **Server side processing takes away the reliance of the browser having the correct interpreter. It hides the code from the user, protecting copyright and avoiding it being amended/circumvented.**
- **Server side processing puts extra load on the server. This is at the cost of the company hosting the website.**

Evaluation

- **Client side processing is best used when it's not critical code that runs. If it is critical then it should be carried out on the server. Client side processing is also best where a quick response is needed – an example being games.**
- **Server side processing is best used where it is integral that processing is carried out. It is often used for generating content. It can be used to access data including secure data. For this reason any data passed to it has to be checked carefully.**
- **With some things like validation good practice is to do both: First on the client for a quick response if there is an issue, then on the server in case the client side processing has been circumvented.**

