Report for AS91074

Demonstrate understanding of basic concepts from computer science

Algorithms 1 - Algorithms vs Programs vs Informal Instructions

Examples of an informal instruction, algorithm, and program for searching.

Informal Instruction
[Write the instruction you'd give to your friend to get them to find the number of a specific shop in the phone book]
Algorithm - [State where you got this example from!]
[Include the algorithm example of binary search your teacher has given you]
Program - [State where you got this example from!]
[Include the program example of binary search your teacher has given you]

My friend can easily make sense of my informal instruction because [explain why your informal instruction will be meaningful to your friend].

A computer could not make sense of my informal instruction because [explain why it would not make sense to a computer].

The difference between programs and algorithms is [describe at least one difference between programs and algorithms]

An example of an if statement being used in the algorithm is [clearly specify an if statement that is used in the algorithm example above]. The if statement is used in this example so that [explain what significance the if statement has to binary search's functionality]

An example of a loop being used in the algorithm is [clearly specify a loop that is used in the algorithm above]. The loop is used in this example so that [explain what significance the loop has to binary search's functionality]

Algorithms 2 - Analysing Binary Search

[Put your introduction to what it is you are going to be doing]

Delete any steps you do not need and resize as needed. Each full page should have no fewer than 4 photos on it

[Photo of first step]	[Photo of second step]
Decision: [Is the target before or after this page?] Explanation of decision: [Explain why you made the stated decision] Range target must be in: [What is the minimum page number and the maximum page number that the shop must be on?]	Decision: [Is the target before or after this page?] Explanation of decision: [Explain why you made the stated decision] Range target must be in: [What is the minimum page number and the maximum page number that the shop must be on?]

[Photo of third step]	[Photo of fourth step]
Decision: [Is the target before or after this page?] Explanation of decision: [Explain why you made the stated decision] Range target must be in: [What is the minimum page number and the maximum page number that the shop must be on?]	Decision: [Is the target before or after this page?] Explanation of decision: [Explain why you made the stated decision] Range target must be in: [What is the minimum page number and the maximum page number that the shop must be on?]
[Photo of fifth step]	[Photo of sixth step]
Decision: [Is the target before or after this page?] Explanation of decision: [Explain why you made the stated decision] Range target must be in: [What is the minimum page number and the maximum page number that the shop must be on?]	Decision: [Is the target before or after this page?] Explanation of decision: [Explain why you made the stated decision] Range target must be in: [What is the minimum page number and the maximum page number that the shop must be on?]

[Photo of seventh step]	[Photo of eighth step]
Decision: [Is the target before or after this page?] Explanation of decision: [Explain why you made the stated decision] Range target must be in: [What is the minimum page number and the maximum page number that the shop must be on?]	Decision: [Is the target before or after this page?] Explanation of decision: [Explain why you made the stated decision] Range target must be in: [What is the minimum page number and the maximum page number that the shop must be on?]
[Photo of ninth step]	[Photo of tenth step]
Decision: [Is the target before or after this page?] Explanation of decision: [Explain why you made the stated decision] Range target must be in: [What is the minimum page number and the maximum page number that the shop must be on?]	Decision: [Is the target before or after this page?] Explanation of decision: [Explain why you made the stated decision] Range target must be in: [What is the minimum page number and the maximum page number that the shop must be on?]

[Photo of eleventh step]	[Photo of twelfth step]
Decision: [Is the target before or after this page?] Explanation of decision: [Explain why you made the stated decision] Range target must be in: [What is the minimum page number and the maximum page number that the shop must be on?]	Decision: [Is the target before or after this page?] Explanation of decision: [Explain why you made the stated decision] Range target must be in: [What is the minimum page number and the maximum page number that the shop must be on?]

The cost of the algorithm was [Cost of algorithm - Ask your teacher for help if you don't know what this means]. I got this answer because [Explain how you know what the cost of the algorithm was]. Using linear search would have had a cost of [cost of linear search - Ask your teacher if you don't know].

Therefore, I have learnt that [what have you learnt from doing this?]

Programming Languages

An example of a high level program I wrote:

```
[Paste your program example here. Resize the box as needed]
```

[Brief explanation of what the program is supposed to output]

An example of a low level program that [State where you got this example from!]:

```
[Paste your program example here. Resize the box as needed]
```

[Brief explanation of what the program is supposed to output]

Two features shown in my high level program example which make it easier for a human to read, write and understand than the low level program are:
- [Explanation of the first feature which makes the high level language example "human friendly"]
- [Explanation of the second feature which makes the high level language example "human friendly"]

Two features shown in my low level program which would make it challenging for a human to read and write:
- [Explanation of the first feature which makes the low level language example not so "human friendly"]
- [Explanation of the second feature which makes the low level language example not so "human friendly"]

Computers require low level languages because [explanation of why computers require low level languages]

A compiler solves the problem of differing human and computer needs because [explanation of what a compiler does and how it solves the high level/ low level language problem - one or two sentences should be enough]

Human Computer Interaction

The device I chose is [Device name], my helper was [Helper name], and the task I chose was [Write an explanation of the task you asked your helper to do]

The purpose of my chosen interface is [explain what you chosen interface is for, even if it seems obvious! One or two sentences is fine]

[Insert one or two images of your device here]

The list of steps my helper took was:
1) ……………………………………………………………………………………..

2) …………………………………………………………………….
3) …………………………………………………………………….
4) …………………………………………………………………….
5) …………………………………………………………………….
6) …………………………………………………………………….
7) …………………………………………………………………….
8) …………………………………………………………………….
(Alter this list to contain as many or as few bullet points as you need)

Analysis

(If your helper found the task challenging, the first paragraphs will be the easiest for you to fill out. If your helper found the task really easy, the last paragraphs will be the easiest for you to fill out)
(Remove any paragraphs you do not complete. You need to complete **at least two** of them)

My helper had trouble with [an aspect of the task] because [write an explanation as to why you think they had trouble. Be sure to explain what they were trying to do, and relate it to the stuff you learnt in class about designing good interfaces. One or two sentences will probably be enough.]

My helper also had trouble with [an aspect of the task] because [write an explanation as to why you think they had trouble. Be sure to explain what they were trying to do, and relate it to the stuff you learnt in class about designing good interfaces. One or two sentences will probably be enough.]

My helper also had trouble with [an aspect of the task] because [write an explanation as to why you think they had trouble. Be sure to explain what they were trying to do, and relate it to the stuff you learnt in class about designing good interfaces. One or two sentences will probably be enough.]

My helper knew how to [an aspect of the task] because [write an explanation as to why you think the interface helped them. e.g. a meaningful icon that they recognised from elsewhere. One or two sentences will probably be enough.]

My helper also knew how to [an aspect of the task] because [write an explanation as to why you think the interface helped them. e.g. a meaningful icon that they recognised from elsewhere. One or two sentences will probably be enough.]