**Reading (VIPERS FORM)**

Use this form to record key ideas from reading to prepare for the lessons.  make sure you upload the completed form in TEAMS (Reading section)

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| Topic you prepared: | Links used: |
| Linked lists | [Linked List Presentation.pptx (sharepoint.com)](https://stokesfc.sharepoint.com/:p:/s/Computing/EYzRZoXuLL5Gja3J0NUJo6MBWDNutklV15o-q6YmJ_0FVg?e=K62sUT) |

Terms: Write any new technical term and their meaning, add more rows if needed.

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| **Terms** | **Meaning** |
| Linked lists | A dynamic abstract data structure which can be implemented as array or pointers.  - Composed of nodes |
| Node | 2 parts:  The data (possibly complex data structure) or a pointer (the index) of the next node |
| Start pointer | Identifies the first node |
| Array implementation | Is Initialised as a list of free spaces |

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| **What can we understand from the topic?** |
| Adding nodes: Put the data in the node pointed by next free and follow the pointers to find where the new node needs to be linked in.  Deleting a node:  To delete, adjust the pointers, the deleted node can be linked back to the list of free nodes adjusting the pointer in next free and the pointer in the deleted node. |

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| **How this topic linked to other previous topics ? What conclusions can we draw from this topic?** |
| Unsure of the links besides lists and arrays as a collection of data. |

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| **What are the strengths / applications of this topic? (e.g. accuracy, steps of calculations, time or space complexity, used when …., hardware and software needs, ethical or legal issues, ….etc.)** |
| We can add and delete nodes allows implementing other ADTs such as queues, stacks and trees. |

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| **What are the limitations / drawbacks of this this topic (e.g. problems, limited accuracy, too many steps, too complex, cannot be used when, hardware requirements, ethical and legal issues, ….. etc.)** |
| There isn’t any limitations I can think of but possibly that when it comes to deleting and adding multiple nodes it could get difficult to comprehend not in programming.  Perhaps the arrangement of data could not be representative to the information given. |

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| **Write a summary of the topic in 50 words** |
| The linked list is a dynamic abstract data structure which can be in the form of array and pointers. These are composed of nodes which carry the data and pointers which is the index (identifies placement). We can do different operations such as deleting (-) and adding (+) which can be used to organise the data stored. |