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| NAME | GRAPH |
| REPRESENTATION | Graph Theory Graph Representations - javatpoint Graph Theory Graph Representations - javatpoint |
| INVARIANT | - |
| OPERATIONS | Graph - 🡪 Graph  Add Edge x Element y Element -> Graph  Add vertex x Element 🡪 Graph  Get Vertex k Key 🡪 Element |

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| Queue - 🡪 Queue  “Builds an empty graph”  {Pre: -}  {Pos:Graph g = } |

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| Add Edge x Element y Element-> Graph  “Adds a new directed edge to the graph that connects two vertices.”  {Pre: Graph g = < e1>< e2> }  {Pos: Graph g = <e1, e2,> } |

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| Add Vertex x Element 🡪 Graph  “Adds an instance of Element to the graph.”  {Pre: Graph g = }  {Pos: Graph g = <e1> } |

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| Get Vertex k Key 🡪 Element  “Finds the vertex in the graph named vertKey.”  {Pre: k Key }  {Pos: Element e} |