Lab #14

Programming and Algorithms

Please complete all of the following questions:

1. Modify the code for the “Stacks as Arrays” program to create a menu-driven program (see Week #11), with the following options:

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| * 1. Create a stack   2. Check if the stack is full   3. Check if the stack is empty   4. Push an element onto the stack   5. Pop an element off the stack   6. Inspect the top of the stack   7. Clear stack   99) Exit |

1. Modify the code for the “Queues as Arrays” program to create a menu-driven program (see Week #11), with the following options:

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| * 1. Create a queue   2. Check if the queue is full   3. Check if the queue is empty   4. Add an element onto the queue   5. Take an element off the queue   6. Clear queue   99) Exit |

1. Modify the code for the “Circular Queues as Arrays” program to create a menu-driven program (see Lab #11), with the following options:

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| * 1. Create a circular queue   2. Check if the circular queue is full   3. Check if the circular queue is empty   4. Add an element onto the circular queue   5. Take an element off the circular queue   6. Clear circular queue   99) Exit |

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| e-mail me a completed solution to each of the above programs in a Word document, and include Lab #13 in this document also.  e-mail to [Damian.Gordon@dit.ie](mailto:Damian.Gordon@dit.ie) with subject heading “DT255 PaA Lab #13-14” |