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# Csc344 Problem Set: Memory Management / Perspectives on Rust ((Template))

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*This is the **TEMPLATE** for the “Memory Management / Perspectives on Rust” problem set.*

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## Task 1 - The Runtime Stack and the Heap

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<<Paragraph 1: Introductory paragraph that indicates what the following two paragraphs are going to talk about, and why the discussion is of some significance.>>

<<Paragraph 2: Conceptual description of the runtime stack.>>

<<Paragraph 3: Conceptual description of the heap.>>

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## Task 2 - Explicit Memory Allocation/Deallocation vs Garbage Collection

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<<Paragraph 1: Introductory paragraph that indicates what the following two paragraphs are going to talk about, and why the discussion is of some significance.>>

<<Paragraph 2: Conceptual description of explicit allocation/deallocation of memory, along with the mention of at least two well-known programming languages that require the programmer to engage in the explicitly allocation and deallocation of memory.>>

<<Paragraph 3: Conceptual description of garbage collection, including an abstract description of how a system collects garbage, along with the mention of at least two well-known programming languages that perform garbage collection.>>

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## Task 3 - Rust: Memory Management

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1. <<Salinet sentence sequence 1>>
2. <<Salinet sentence sequence 2>>
3. <<Salinet sentence sequence 3>>
4. <<Salinet sentence sequence 4>>
5. <<Salinet sentence sequence 5>>
6. <<Salinet sentence sequence 6>>
7. <<Salinet sentence sequence 7>>
8. <<Salinet sentence sequence 8>>
9. <<Salinet sentence sequence 9>>

10. <<Salinet sentence sequence 10>>

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## Task 4 - Paper Review: Secure PL Adoption and Rust

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Review of “Benefits and Drawbacks of Adopting a Secure Programming Language: Rust as a Case Study”.  
[https://obj.umiacs.umd.edu/securitypapers/Rust\\_as\\_a\\_Case\\_Study.pdf](https://obj.umiacs.umd.edu/securitypapers/Rust_as_a_Case_Study.pdf)

<<Paragraph 1>>

<<Paragraph 2>>

<<Paragraph 3>>