Parul University

Faculty of Engineering & Technology

Parul Institute of Technology

Computational Thinking for Structured Design-2

Assignment No: 1

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1. What is pointer? How to accessing a variable through its pointer?
2. List out types of pointers? Explain in detail.
3. Explain the concept of an array of pointers. How can you use it to store addresses of dynamically allocated memory blocks?
4. What is pointer to pointer? Explain double pointer with example.
5. Explain call by value and call by reference with example.
6. Explain the purpose of dynamic memory allocation in C. Discuss the differences between stack memory and heap memory.
7. Compare malloc and calloc. What is the key difference between them? Provide an example demonstrating their usage.
8. Explain the purpose of realloc. Provide a scenario where resizing an existing memory block is necessary.
9. Explain the difference between free and delete in C. When should you use each?
10. What happens if you forget to free dynamically allocated memory? How can memory leaks impact program performance?