



Date: 25/06/2024

Teaching Aids: C code Visualizer

1. Semester/Division: II (E-Div)
2. Course: Principles of C Programming
3. Course code: BPOPS203
4. Topic: Visualize the execution of C Programs
5. Working model (Photos)/Chart: C code Visualizer

<https://pythontutor.com/visualize.html#mode=edit>

The screenshot shows the Python Tutor interface for C code visualization. On the left, the C code is displayed with a line-by-line execution flow. The code includes a main function that declares an array 'x' with values {10, 20, 30}, a pointer 'p' pointing to the second element, and a character array 'fruit' containing "apples", "bananas", and "cherries". The program prints "I have 20 bananas" and returns 0.

On the right, the memory visualization shows the Stack and Heap. The Stack contains the main function's local variables: 'x' (array of ints), 'p' (pointer to int), and 'fruit' (array of pointers to char). The Heap contains three character arrays: 'array' with 'a', 'p', 'p', 'l', 'e'; 'array' with 'b', 'a', 'n', 'a', 'n', 'a'; and 'array' with 'c', 'h', 'e', 'r', 'r', 'y'. Arrows indicate the pointers in the stack pointing to the corresponding memory locations in the heap.

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