16.216: ECE Application Programming
Spring 2014

Lecture 18: Key Questions
March 9, 2014

1. Explain the use of arrays: what an array represents, how to define an array, and how to access values within the array.

2. Explain how the following example works:

```c
int main(void)
{
   int x[8];
   int i;

   // get 8 values into x[]
   for (i=0; i<8; i++)
   {
        printf("Enter test %d:",i+1);
        scanf("%d",&x[i]);
   }
}
```

3. What happens if we change the loop condition to `i <= 8`? How can we avoid this problem?

4. **Example:** What does the following program print?

```c
int main() {
      int arr[10];
      int i;

      printf("First loop:\n");
      for (i = 0; i < 10; i++) {
            arr[i] = i * 2;
            printf("arr[%d] = %d\n", i, arr[i]);
      }

      printf("\nSecond loop:\n");
      for (i = 0; i < 9; i++) {
            arr[i] = arr[i] + arr[i + 1];
            printf("arr[%d] = %d\n", i, arr[i]);
      }
      return 0;
}
```