Name: KEY Id#

ICS 103, Term 083

Computer Programming in C

Quiz# 3

Date: Tuesday, August 18, 2009

**Find the output of the following programs:**

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| --- | --- |
| **Program** | **Output** |
| 1. **6 points**   #include <stdio.h>    void test1(int x, char htable[]);  int main(void)  {  int x=125;  char htable[]={'0','1','2','3', '4','5','6','7','8','9','A','B', 'C','D','E','F'};    test1(x, htable);  printf("\n");  return 0;  }  void test1(int x, char htable[]){    if (!x) return;  else test1(x/16, htable);  printf("%c", htable[x%16]);  } | **7D**  **First call since the value of x=125 is not 0, the function will be called again with argument 125/16=7.**  **Since 7 is not 0, the function will be called with argument 7/16=0.**  **Now since x is 0 it will return without doing anything. This will be the return of the 2nd call so it will print htable[7%16=7]=’7’.**  **Then, it returns to the first call which will print htable [125%16=13]=’D’.** |
| 1. **6 points**     #include <stdio.h>  #define SIZE 10  void test2 (int x[], int n){  int i;  for (i=0; i<n; i++)  x[i]=i\*i;  }  void test3 (int x[], int n){  int i,j;  for (i=0; i<n/2; i++){  j=x[i];  x[i]=x[n-i-1];  x[n-i-1]=j;  }  }  void test4 (int x[], int n){  int i;  for (i=0; i<n; i++)  printf("%d ",x[i]);  printf("\n");  }  int main(void)  {  int x[SIZE];  test2(x, SIZE);  test3(x, SIZE);  test4(x, SIZE);  return 0;  } | **81 64 49 36 25 16 9 4 1 0**  **Call of function test2 will initialize the array x to:**  **0 1 4 9 16 25 36 49 64 81**  **Call of function test3 will reverse the array x to:**  **81 64 49 36 25 16 9 4 1 0**  **Call of function test4 will print the elements of array x separated by spaces.** |