ESc101N: Fundamentals of computing(Lab Session 6)

September 9, 2009

Instructions

1. Please read the question carefully and write the program accordingly

2. Make sure that the TA has graded you program

3. The marks are distributed as follows. You get 60% of the marks if the basic algorithm is current, 20% if you manage to compile and execute and 20% for writing the code cleanly, i.e. using proper variable names, intending and making the code more readable.

Question 1. (a) (5 marks) Write a function `fromString` which takes a string of binary digits `0` and `1` and return the integer corresponding to it. Eg.

```
int x;
x = fromString("101");
```

should assign x the value 5 ;

  (b) (5 marks) Write a function `toString` that takes as argument an int and a character array and writes into the array the string representation of the int in binary eg.

```
char a[100];
toString(8,a);
```

should result in `a` having the contents `"1000"`. Be careful of trailing '`\0`' character.

Here is the skeleton main function

```
#include <stdio.h>

/* declarations of toString and fromString here  */
int main()
{
    char buf[100];
    int val;
    printf("enter the string of digits: ");
    scanf("%100s", buf);
    printf("as integer the string is %d\n", fromString(buf));
    printf("enter the integer: ");
    scanf("%d", &val);
    toString(val,buf);
    printf("as string %d is %s\n", val, buf);

}
```