

Name : _____

CS 100 Quiz #10

Give the output of the C program shown below when run with the command `./a.out 1 3 0 2`

```
#include <stdio.h>
#include <stdlib.h>
typedef struct node {
    char ch;
    struct node *next;
} Node;
int main(int argc, char *argv[]) {
    Node a, b, c, d;
    a.ch = 'T'; a.next = &b;
    b.ch = 'I'; b.next = &c;
    c.ch = 'D'; c.next = &d;
    d.ch = 'E'; d.next = &a;

    Node *ptr = &a;
    for (int a=1; a<argc; a++) {
        int val = atoi(argv[a]);
        for (int b=0; b<val; b++)
            ptr = ptr->next;
        printf("%c\n", ptr->ch);
    }

    return 0;
}
```



Give the output of the C program shown below when run with the command `./a.out 31415`

```
#include <stdio.h>
#include <stdlib.h>
typedef struct node {
    int val;
    struct node *next;
} Node;
int main(int argc, char *argv[]) {
    Node *ptr = NULL;
    int number = atoi(argv[1]);
    while (number > 0) {
        int num = number % 10;
        Node *temp = malloc( sizeof(Node) );
        temp->val = num;
        temp->next = ptr;
        ptr = temp;
        number = number / 10;
    }
    while (ptr) {
        printf("%d\n", ptr->val);
        ptr = ptr->next;
    }
    return 0;
}
```

