

CS 2213 Midterm Exam 3 Solutions — Spring 2001

1) (15 points)

```
#include <stdio.h>
int main() {
    int c;
    int newline = 1;
    while ( (c=getchar()) != EOF) {
        if (c == '\n') {
            if (!newline) {
                putchar(c);
                newline = 1;
            }
        }
        else {
            putchar(c);
            newline = 0;
        }
    }
    return 0;
}
```

2) (15 points)

```
#include <stdio.h>
#include <string.h>
int main(int argc, char *argv[]) {
    int i;
    for (i=1;i<argc;i++)
        if ( *(argv[i]+strlen(argv[i])-1) == '-') {
            printf("%s\n",argv[i]);
            return 0;
        }
    printf("No command line parameter ends with a -\n");
    return 0;
}
```

3) (20 points)

```
void printvals(stringval *svals, int n, char *s) {
    int i;
    printf("%s ",s);
    for (i=0;i<n;i++)
        if (strcmp(svals[i].str,s) == 0)
            printf("%d ",svals[i].val);
    printf("\n");
}
```

4) (20 points)

```
int findval(char *s, hashentry *htp) {
    int index;
    int i;
    index = hashfunction(s);
    for (i=0;i<HASHSIZE;i++) {
        if (htp[index].status == HASH_STATUS_EMPTY)
            return -1;
        if ( (htp[index].status == HASH_STATUS_FULL) &&
            (strcmp(htp[index].sval.str,s)==0) )
            return htp[index].sval.val;
        index++;
        if (index >= HASHSIZE) index = 0;
    }
    return -1;
}
```

5) (30 points)

- a) 50 string 2
- b) 500 Another string
- c) 500 tring 2
- d) 498 The last string nother string
- e) 4 string 2 This is string 1
- f) 50 string 2