

EE 2920

Dr. Johnson

Homework 3

1 – Given the following program. What will be printed out for the answer if the user enters 55 as the input? 30pts

```
/*
 * hw3_1.c
 */
#include <stdio.h>

int fun1(int a);
int fun2(int a);
int fun3(int a);

int main(void){
    int a;
    int b;

    printf("Enter an integer: ");
    scanf("%d", &a);

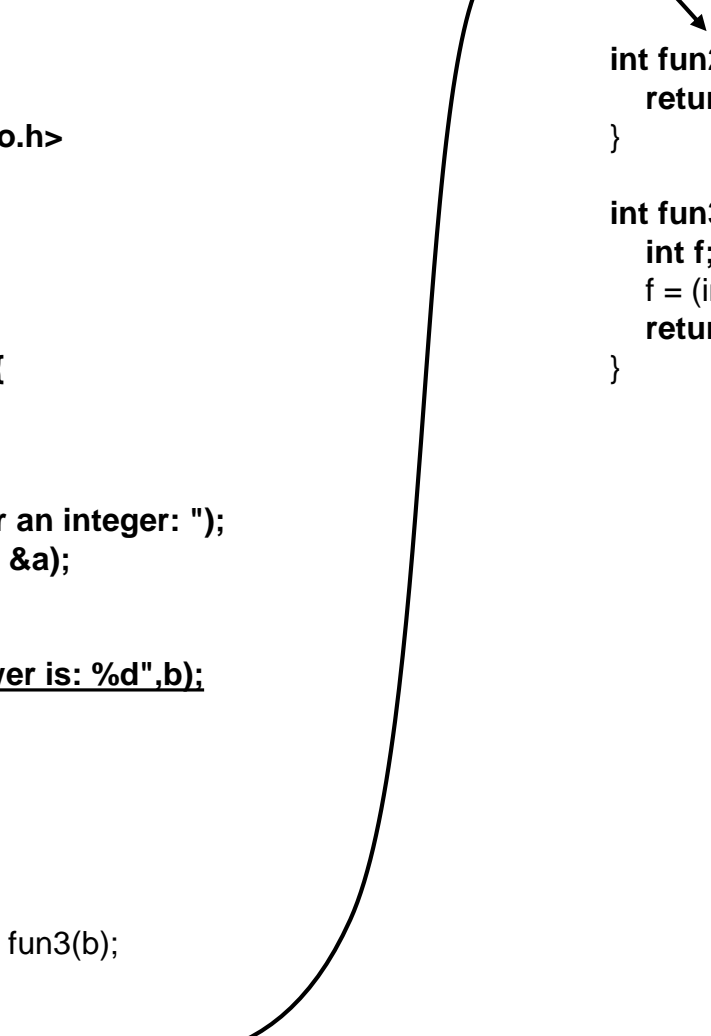
    b = fun1(a);
    printf("answer is: %d",b);

    return 0;
}

int fun1(int b){
    int c;
    c = fun2(b) + fun3(b);
    return c;
}
```

```
int fun2(int d){
    return(d % 10);
}

int fun3(int e){
    int f;
    f = (int)(e / 10.0) % 10;
    return f;
}
```



2 – Given the following memory map – evaluate each item

30pts

```
int foo,boo,zoo;  
int* a_ptr, b_ptr;
```

variable name	value	address
foo	0x1234	0x2000
boo	0x8000	0x3000
zoo	0x2324	0x4000
a_ptr	0x4000	0x8000
b_ptr	0x3000	0x9000

&boo

*b_ptr

a_ptr

&b_ptr

boo + b_ptr + *a_ptr + &boo

HEX

3 – Provide the final values after executing the following code snippet 40pts

```
#include <stdio.h>

int fun1(int* a, int* b);
float fun2(float a, float* b);

float fun2(float zoo, float* soo){
    *soo *= 3*zoo;
    return *soo;
}

int main(void){

    int a = 3;
    int b = 2;
    float c = 6.5;
    float d = 2.5;
    int e = 12;

    a = fun1(&a,&b);
    e = fun2(c,&d);

    return 0;
}

int fun1(int* foo, int* boo ){
    int zoo;
    if (*boo > 0){
        zoo = 2**foo;
    }
    else{
        zoo = 3**foo;
    }
    *boo = zoo + *foo;
    *foo = 12;
    return zoo;
}
```

