COMPUTER PROGRAMMING I GROUP (5) LAB (2)12224 ANSWERS TO VERBAL QUESTIONS

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2- Answer: This program reads the data input as characters until control-d is entered. The program then prints the entries in the reverse order from when they were entered.

Sample run: user enters: 123<control-d> program prints: 321

Explanation:

Original main () function invocation: In main (), a character is read into c (a in the example above). Since it is not control-d, it calls itself (main ()).

First call to the function: The second character is read into c (2 in the example above). Since it is not control-d, then main() is called again.

Second call to the function: The third character is read into c (b in the example above). Since it is not control-d, then main() is called again.

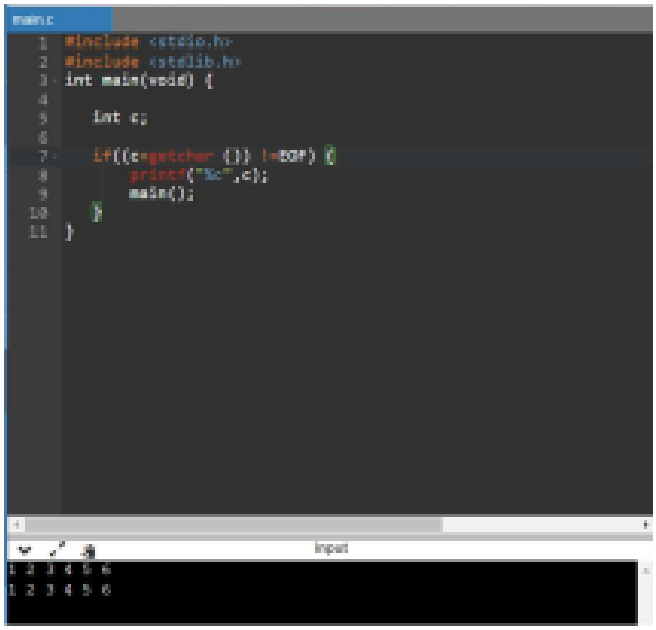
This process continues until the user enters control-d.

Third call to the function: The user enters control-d. This is the base case. The if-expression is false, we return to the second call to the function.

Second call to the function: Execution continues at the printf () statement. The last value that was entered for c (b in the example above) is printed to screen. Then, we return to the first call to the function.

First call to the function: Execution continues at the printf () statement. The second value that was entered for c (2 in the example above) is printed to screen. Then, we return to the original main () function invocation.

Original main () function invocation: Execution continues at the printf () statement. The first value that was entered for c (a in the example above) is printed to screen. Then, the program ends.



If we replace the 5th and 6th items, the result will be the same in the order entered.

4- Find the error in each of the following program segments and explain how to correct it: a) double cube(float);

```
double cube (float number)
        return number * number * number;
        }
```

Explain: If we add double before the cube the error will be solved.

b)

```
double y = 123.45678;
int x;
        x = y;
        printf("%lf\n", (double) x);
```

c)

```
        double square(double number){
          //double number; (this part will be erased)
        return number * number;
        }
```

d)

```
int sum(int n)
        { if (0 == n) {
     return 0;
     }
     else {
        return n + sum(n-1);
        }
}
```