**Questions**

**General array and pointers topic**

1. abc is an array of 6 chars containing the values 12, 6, 8, 34, 54, 4

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1. abc is a pointer to char initialized to point to a string literal “program”

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1. abc is an array of read-only char of unspecified size that initialized to contain the string “program”

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1. abc is an array of read-only pointers to chars initialized to pointers to strings “Programming”, “is”, ‘as”, “easy”, “as”, “nothing”

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1. abc is a function that takes in 3 arguments, a pointer to short, an unsigned int, a pointer to read-only float

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1. Write the print out value

int main(){

char c1[9] = “abc”;

char c2[] = “defghi”

strcat(s1, s2);

printf(“%s\n”, s1);

return 0;

}

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int main(){

const char c1[] = “hornorificabiliudinitatibus”;

char \*s2 = “hornorificabiliudinitatibus”;

int x = strcmp(s1, s2);

printf(“%d, %d, %d\n”, x>0, x==0, x<0);

return 0;

}

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int main(){

const char \* strs[] = { “programming”, “is a very easy”, “thing to learn”, “in computer”, “science”};

const char\*\* tmp = strs;

while(tmp!=strs+5)

printf(“%c”, \*(\*tmp++ +(tmp-strs)));

return 0;

}

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1. Write the value

int \*p = malloc(8);

int \*q = malloc(8);

int i = 0;

p[0] = 1; p[1]=3; q[0]=4; q[1]=7;

\*++p=\*q++;

* 1. \*p

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* 1. \*--p

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* 1. p[i++]

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* 1. (--q)[i++]

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* 1. p[ (i-1) [q] / 4 ]

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1. Write the implementation of the following function declaration:

char find\_first\_duplicate(const char \*);

printf(“prints \”%c\” “, find\_first\_duplicate(“apple”)); /\* prints “p” \*/

printf(“prints \”%c\” “, find\_first\_duplicate(“cookie and apple”)); /\* prints “o” \*/

printf(“prints \”%c\” “, find\_first\_duplicate(“boi”)); /\* prints “” \*/

printf(“prints \”%c\” “, find\_first\_duplicate(“a”)); /\* prints “” \*/

printf(“prints \”%c\” “, find\_first\_duplicate(“”));/\* prints “” \*/

printf(“prints \”%c\” “, find\_first\_duplicate(0)); /\* undefined behaviour \*/

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