Quiz A Module 4

Due Apr 24 at 11:59pm **Points** 8 **Questions** 8 **Time Limit** 10 Minutes
Allowed Attempts Unlimited

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Attempt History

	Attempt	Time	Score
KEPT	Attempt 2	5 minutes	8 out of 8
LATEST	Attempt 2	5 minutes	8 out of 8
	Attempt 1	10 minutes	7 out of 8

Correct answers are hidden.

Submitted Apr 20 at 1:08pm

Question 1 — 1 / 1 pts

```
char *c;

fread(c,1,1,file);

//What about that?
```

- (●) This will most likely segfault, because fread tries to read one byte from the file and stores it into an unknown address.
- ( ) That is clearly a segfault, because you need to provide an address-of operator.
- ( ) Thats fine, the address will be determined by fread.
- ( )

This will most likely segfault, because the pointer "c" needs to be set to NULL first.

Question 2

1 / 1 pts

You want to allocate a text array with 1000 bytes as shared memory. You do:

- char text = (char) mmap(NULL,1000,PROT_READ|PROT_WRITE,MAP_SHARED|MAP_ANONYMOUS,-1,0);
- char *text[1000] = (char) mmap(NULL,1000,PROT_READ|PROT_WRITE,MAP_PRIVATE|MAP_ANONYMOUS,-1,0);
- **char *text = (char*) mmap(NULL,1000,PROT_READ|PROT_WRITE,MAP_SHARED|MAP_ANONYMOUS,-1,0);**
- char *text = (char*) mmap(NULL,1000,PROT_READ|PROT_WRITE,MAP_PRIVATE|MAP_ANONYMOUS,-1,0);

Question 3

1 / 1 pts

```
file = fopen(...);
while(1)
{
fread(&c,1,1,file);
fclose(file);
}
```

- Thats fine, nothing wrong with the code.
- This will most likely segfault, because you need to fopen the file every time before a fread statement.
- Segfault: You close the file pointer, but continue reading from it.

Question 4

1 / 1 pts

typedef struct bm {int i; int y;}bm;

...

FILE *file = fopen("myfile.bin","rb");

//you want to read "bm" from the file. How to do that?

- bm *a;
  fread(&a,sizeof(bm),1,file);
- bm *a;
  fread(a,sizeof(bm),1,file);
- bm *a = malloc(sizeof(bm));
  fread(a,sizeof(bm),1,file);
- bm a;
  fread(&a,sizeof(bm),1,file);

Question 5

1 / 1 pts

```
char text[5];

for(int i=0;i<5;i++)

    text[i] = (char)
mmap(NULL,1000,PROT_READ|PROT_WRITE,MAP_SHARED|MAP_ANONYMOUS,-1,0);
```

//what would you do instead if you want to allocate an array where 3 names (with max 20 letters each) fit in?

- THAT. IS. FINE.
- (selected) `char* text = (char*) mmap(NULL,1000,PROT_READ|PROT_WRITE,MAP_SHARED|MAP_ANONYMOUS,-1,0);`
- `for(int i=0;i<1000;i++) char* text [i]= (char*) mmap(NULL,1,PROT_READ|PROT_WRITE,MAP_SHARED|MAP_ANONYMOUS,-1,0);`
- `char* text [1000]= (char*) mmap(NULL,1,PROT_READ|PROT_WRITE,MAP_SHARED|MAP_ANONYMOUS,-1,0);`

Question 6

1 / 1 pts

Sending (not assigning) a signal from within c-language works with:

- signal([SIGNALTYPE],[FUNCTIONPOINTER]);
- kill([SIGNALTYPE],[FUNCTIONPOINTER]);
- (selected) kill([PID], [SIGNALTYPE]);
- signal([SIGNALTYPE],[PID]);

Question 7

1 / 1 pts

```
char text[5];

for(int i=0;i<5;i++)

    text[i] = (char)
mmap(NULL,1000,PROT_READ|PROT_WRITE,MAP_SHARED|MAP_ANONYMOUS,-1,0);

//what is happening here?
```

- You allocate five characters and store them correctly into the array of 5 char's.
- **You allocate five arrays, 1000 bytes each and try to cast the address into a character value, which leads to some carryover and a total useless number.**
- You allocate five arrays, 1000 bytes each and save the address successfully in the array of char pointers.

Question 8

1 / 1 pts

When to use malloc() (in general) ?

- **Only if the size of the necessary space is unknown at compile time and/or the size of the required space is major in comparison with the stack or even exceeds it.**
- On list-elements, structs and arrays.
- On every variable or struct which gets fread().
- On every array and every struct if possible.