Pointers to Pointers

CIS 308

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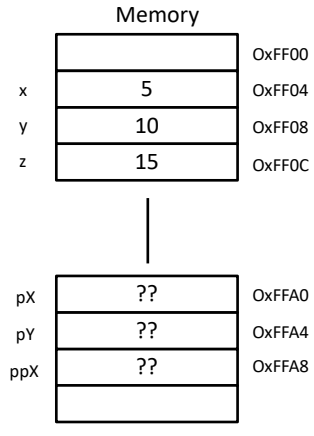
Pointers to Pointers

```
int x = 5;
int y = 10;
int z = 15;

int * pX;
int * pY;

//Now we can have
int* * ppX;
```



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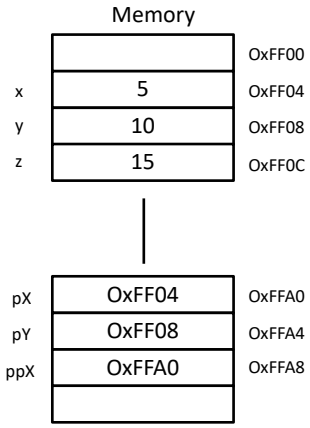
Pointers to Pointers

```
int x = 5;
int y = 10;
int z = 15;

int* pX = &x;
int* pY = &Y;

//Now we can have
int** ppX = &pX;
```



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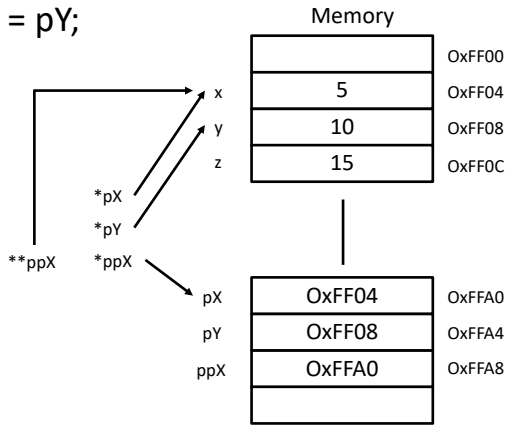
Pointers to Pointers

*ppX = pY;



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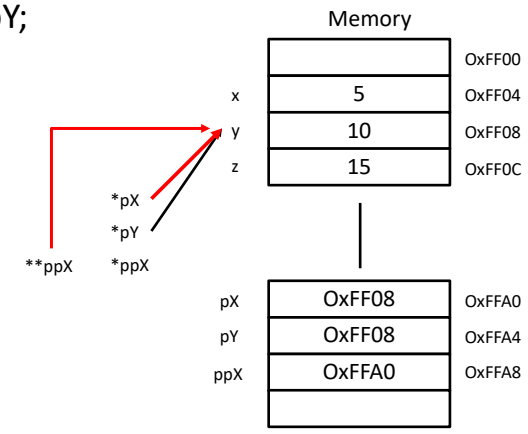
*ppX = pY;



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```
#include <stdlib.h>

    int allocstr(int len, char **retptr)
    {
        char *p = malloc(len + 1);/* +1 for \0 */
        if(p == NULL)
            return 0;
        *retptr = p;
        return 1;
      }
```


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Pointers to Pointers

```
char* string = "Hello, world!";
char* copystr;

if(allocstr(strlen(string), &copystr))
     strcpy(copystr, string);
else
   printf("out of memory\n");
```

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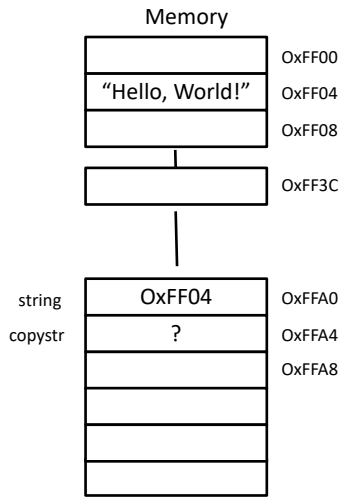

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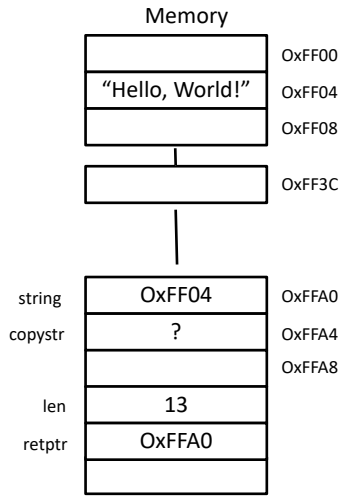

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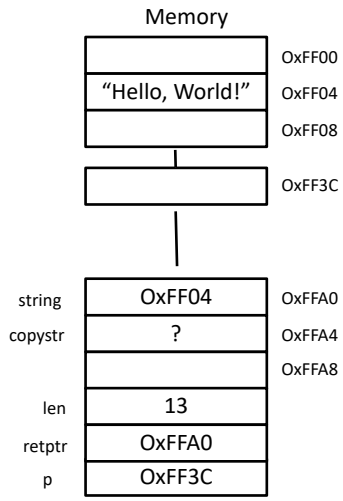

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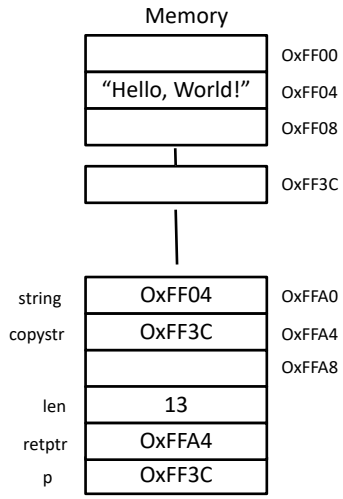

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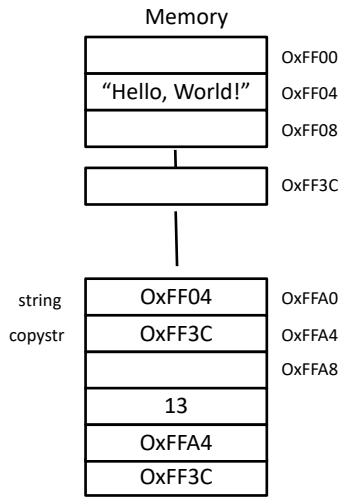

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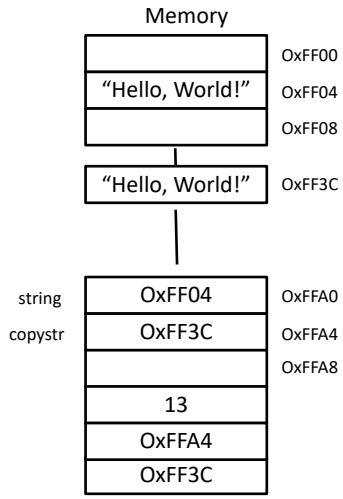

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Pointers to Pointers

Lab Activity

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