```c
#include <stdio.h>
#include <stdlib.h>
#include <string.h>

int *copying(const int *var1, int var2)
{
    int *ptr = malloc(var2 * sizeof(*ptr));

    int *var3 = ptr;

    int i;
    for(i = 0; i < var2; i++, var1++, ptr++)
    {
        *ptr = *var1;
    }
    return var3;
}


int main()
{
    int arr[5] = {5, 10, 15, 20, 25};
    int *arrPtr = arr;

    int *num = copying(arrPtr, 5);

    int i;
    for(i = 0; i < 5; i++)
    {
        printf("%d\t%p", arr[i], &arr[i]);
        printf("\n");
    }

    printf("\n");
    printf("\n");

    int j;
    for(j = 0; j < 5; j++)
    {
        printf("%d\t%p", num[i], &num[i]);
        printf("\n");
    }

    return EXIT_SUCCESS;
}
```

Output:

```
C:\Users\srivk\OneDrive\Desktop\UNB\Summer2020\CS2263\Lectures\Week3\Day11_May21>prog
5       0061FEFC
10      0061FF00
15      0061FF04
20      0061FF08
25      0061FF0C


10485952        00A015AC
10485952        00A015AC
10485952        00A015AC
10485952        00A015AC
10485952        00A015AC
```

```c
#include <stdio.h>
#include <stdlib.h>
#include <string.h>

char *copyString(char* str)
{
    int length = sizeof(strlen(str)+1);

    char* copy = malloc(length);

    int i;
    for(i = 0; i < length; i++)
    {
        *copy = *str;
    }

    return copy;
}

int main()
{
    char arr[5] = "";
    char *ptr = arr;

    char *var = copyString(ptr);

    int i;
    for(i = 0; i < (sizeof(arr)/sizeof(arr[0])); i++)
    {
```

```c
        printf("%c\t%p", arr[i], &arr[i]);
        printf("\n");
    }

    printf("\n");
    printf("\n");

    int j;
    for(j = 0; j < (sizeof(arr)/sizeof(arr[0])); j++)
    {
        printf("%c\t%p", var[i], &var[i]);
        printf("\n");
    }
}
```

Output:

```
C:\Users\srivk\OneDrive\Desktop\UNB\Summer2020\CS2263\Lectures\Week3\Day11_May21>gcc stringDeepCopy.c -o prog1

C:\Users\srivk\OneDrive\Desktop\UNB\Summer2020\CS2263\Lectures\Week3\Day11_May21>prog1
        0061FF0B
        0061FF0C
        0061FF0D
        0061FF0E
        0061FF0F


        00981605
        00981605
        00981605
        00981605
        00981605
```