

**Dæmi 1:**

<b>Skipun</b>	<b>Gildi</b>	<b>Tag</b>	<b>x</b>	<b>ip</b>	<b>fp</b>	<b>y</b>
int x = 0;	0	int	0			
int* ip = &x;	&x	Pointer á int		&x		
*ip += 1;	1	int	1			
float *fp = (float*)ip;	&x	Pointer á float			&x	
*fp = 1.0;	1.0	int	Int túlkun á float gildinu 1.0			
int y = *ip;	x	int				Int túlkun á float gildinu 1.0

Dæmi 2:

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

char** split(const char* s, int *n)
{
    int i = 0, t = 0, c = 0, l = 0;
    while(s[i] != '\0')
    {
        if(s[i] == ' ' || s[i] == '\t')
        {
            l++;
        }
        i++;
    }
    *n = l+1;
    char **a = (char**) malloc(l+1);
    i = 0;
    while(s[i] != '\0')
    {
        if(s[i] == ' ' || s[i] == '\t')
        {
            char* b = (char*) malloc(i-t+1);
            for(int j = 0; j < (i-t); j++)
            {
                b[j] = s[t + j];
            }
            b[i-t] = '\0';
            a[c] = b;
            c++;
            t = i + 1;
        }
        i++;
    }
    char* b = (char*) malloc(i-t+1);
    for(int j = 0; j < (i-t); j++)
    {
        b[j] = s[t + j];
    }
    b[i-t] = '\0';
    a[c] = b;
    return a;
}

int main()
{
    char *s = "Sesar Hersisson og Breki Pálsson";
    int n;
    char** split_s = split(s, &n);
    for(int i = 0; i < n; i++)
```

```
{
    printf("%s ", split_s[i]);
}
printf("\n");
for(int i = 0; i < n; i++)
{
    free(split_s[i]);
    split_s[i] = 0;
}
free(split_s);
split_s = 0;
}
```

Dæmi 3:

```
double** array_init(int n, int m)
{
    double **A = (double**)malloc(n * sizeof(double*));
    for(int i = 0; i < n; i++)
    {
        A[i] = (double*)malloc(m * sizeof(double));
        for(int j = 0; j < m; j++)
        {
            A[i][j] = 0;
        }
    }
    return A;
}

void array_free(double **A, int n, int m)
{
    for(int i = 0; i < n; i++)
    {
        free(A[i]);
        A[i] = 0;
    }
    free(A);
    A = 0;
}
```