Dæmi 1:

```
matrix margfFylki(matrix A, matrix B)
{
   double * AB = (double*)
     malloc(sizeof(double)*(A.n)*(B.m));
  //counter
  int c = 0;
  double stak = 0;
  for(int i = 0; i < A.n; i++)
  {
    for(int j = 0; j < B.m; j++)
    {
      for(int t = 0; t < B.n; t++)
      {
        stak += A.a[i*A.m + t] * B.a[t*B.m + j];
      }
      AB[c] = stak;
      stak = 0;
      c++;
    }
  }
  matrix C;
  C.a = AB;
  C.n = A.n;
  C.m = B.m;
  return C;
}
```

Dæmi 2:

```
int main()
{
  int n, m;
  scanf("%d %d", &n, &m);
  double* fylkiA = (double*) malloc(sizeof(double)*n*m);
  for(int i = 0; i < n*m; i++)
  {
    double x;
    scanf(" %lf",&x);
    fylkiA[i] = x;
  }
  matrix A;
  A.a = fylkiA;
  A.n = n;
  A.m = m;
  scanf("%d %d", &n, &m);
  double* fylkiB = (double*) malloc(sizeof(double)*n*m);
  for(int i = 0; i < n*m; i++)
  {
    double x;
    scanf(" %lf",&x);
    fylkiB[i] = x;
  }
  matrix B;
  B.a = fylkiB;
  B.n = n;
  B.m = m;
  matrix C;
  C.a = margfFylki(A, B).a;
  C.n = margfFylki(A, B).n;
  C.m = margfFylki(A, B).m;
  //counter
  int c = 0;
  for(int i = 0; i < C.n; i++)
  {
    for(int j = 0; j < C.m; j++)
    {
      printf("%.1lf ",C.a[c]);
      c++;
    }
    printf("\n");
    free(A.a);
    free(B.a);
    free(C.a);
  }
}
```

Dæmi 3:

```c
#include <stdio.h>

int main(int argc, char** argv)
{
  //athugum hvort það sé viðfang
  if(argc > 1)
  {
    //leysum inn allar skrárnar og prentum þær út
    for(int i = 1; i < argc; i++)
    {
      char* filename = argv[i];
      // opnar skrá til lesturs
      FILE* file = fopen(filename, "r");
      char line[1024]; // line er char fylki sem við lesum
inn í

      // fgets les eina línu í- einu
      while (fgets(line, sizeof(line), file)) {
        printf("%s", line);
      }
      printf("\n");
      // lokum skránni
      fclose(file);
    }
  }
  else
  {
    char line[1024];
    while(gets(line))
    {
      printf("%s\n", line);
    }
  }
  return 0;
}
```

Dæmi 4:

```c
#include <stdio.h>

int main(int argc, char**argv)
{
  char* pattern = argv[1];
  int l = 0, c = 0;
  while(pattern[l] != '\0')
  {
    l++;
  }
  char line[1024];
  FILE* file = fopen("Holmes.txt", "r");
  int fj = 0;
  while (fgets(line, sizeof(line), file))
  {
    c = 0;
    while(line[c] != '\0')
    {
      for(int i = 0; i < l; i++)
      {
        if(line[c + i] != pattern[i])
        {
          i = l;
        }
        else if(i == l - 1)
        {
          printf("%s", line);
          fj++;
        }
      }
      c++;
    }
  }
  printf("\nFjöldi lína sem innihald Holmes eru %d\n", fj);
}
```

Dæmi 5:

```
void vector_set(vector* v, unsigned int i, int x) {
  if(i > 0 && i < (v->size)){
    v->a[i] = x;
  }
}

int vector_remove(vector* v, unsigned int i) {
  int show = v->a[i];
  v->size--;
  for(int j = i; j < v->size; j++) {
    v->a[j] = v->a[j+1];
  }
  return show;
}

vector* vector_copy(vector* v) {
  vector *v2 = vector_init();
  for(int i = 0; i < v->size; i++)
  {
    vector_append(v2, v->a[i]);
  }
  return v2;
}

int vector_find(vector* v, int x) {
  for(int i = 0; i < v->size; i++) {
    if(v->a[i] == x) {
      return i;
    }
  }
  return -1;
}
```