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Practical!- Operating System (PBI202)

Q1.

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

char * read_line();
char * s(char *);
char * m(char **);
char ** strings(char*);

int print(char*);

int min_Avg(int customers_rows, int customers_columns, int**
Customers) {
}

int main()
{
FILE *fptr = fopen(get("Output-path"), "w");
int n = p_int(s(m(read_line())));
int** customers = malloc(n * sizeof(int*));
for(int i=0; i<n; i++){
*(customers+i) = malloc(2* (sizeof(int)));
char** Customers_item_temp = strings(m(read_lines));
```

```
for (int j = 0; j<2; j++){
    int customers_item = p->int (*(customers_item_temp+j));
    *(*(customers + i) +j) = customers_item;
  }
}
int result = minimum-Arg (n,2,customers);
fprintf (fptr, "%d\n", result);
fclose (fptr);
return 0;
}
char* read_line() {
  size_t alloc_length = 1024;
  size_t data_length = 0;
  char* data = malloc (alloc_length);
while (1){
    char* cursor = data + data_length;
    char* line = fgets (cursor, alloc_length - data_length, stdin);
if (!line) {
    break;
  }
  data_length += strlen(cursor);
  if (data_length < alloc_length -1 || data_length-1] == '\n')
{
  alloc_length <<= 1;
  data = realloc (data, alloc_length);
```

```
if (!data) {
    data = '\0';
  }
} else {
    data = realloc(data, data_length + 1);
  if (!data) {
      data = '\0';
    } else {
      data[data_length] = '\0';
    }
  }
  return data;
}
char *b(char *str) {
  if (!*str) {
      return str;
    }
  while (*str != '\0' && isspace(*str)) {
      str++;
}
  char *m(char *str) {
  if (!*str) {
      retur str;
    }
    char *end = str + strlen(str) - 1;
    while (end >= str && isspace(*end)) {
      end--;
    }
      *(end+1) = '\0';
      return str;
```

```
{
char** String(char* str){
    char** splits = NULL;
  char* token = strtok(str, " ");
 int spaces=0;

while (token) {
splits = realloc (splits, sizeof(char*) * ++spaces);
 if (!splits) {
     return splits;
}
   splits[spaces-1] = token;
   token = strtok (NULL, " ");
  }
    return splits;
}
 int p- int (char * str) {
     char* endptr;
      int value = strtol( str, &endptr, 10);
 if(endptr == str || *endptr != '\0'){
   exit(EXIT_FAILURE);
  }
  return value;
  }.
```

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