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Course - B.S.C I T
Sec - A

1.)

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#include <stdio.h>
#include <ctype.h>
#include <limits.h>
#include <math.h>
#include <stdbool.h>
#include <stddef.h>
#include <stdin.h>
#include <stdlib.h>
#include <string.h>

char* readline();
char* ltrim(char*);
char* rtrim(char*);
int parse_int(char*);

int main()
{
    FILE* fptr = fopen(getenv("output_Path"), "w");

    int n = parse_int(ltrim(rtrim(readline())));

    int** customers = malloc(n* sizeof(int*));

    for (int i=0; i<n; i++)
    {
        *(customers + i) = malloc(2*(sizeof(int*)));

        char** customers_item_temp = split_string(rtrim(
            readline()));

        for (int j=0; j<2; j++)
        {
            int customers_item = parse_int(*(customers_
                item_temp));
```

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((customers + i) + j) = customers - item; } }
int result = minimum Average (n, 2, customers);
fprintf (fptr, "%d\n", result);
fclose (fptr);
return 0;
}
char * readline () {
size_t alloc_length = 1024;
size_t data_length = 0;
char *data = malloc (alloc_length);
while (true)
{ char* cursor = data + data_length;
char *line = fgets (cursor, alloc_length -
data_length, stdin);
if (!line)
{ break; }
if (data_length < alloc_length - 1 || data[data
length - 1] == '\n')
{ break; }
alloc_length <<= 1;
data = realloc (data, alloc_length);
if (!data)
data = '\0';
break;
} if (data[data_length - 1] == '\n') {
data[data_length - 1] = '\0'; } }
```

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else
data = realloc(data, data_length + 1);
if(!data)
{
  data = '\0';
}
  else
  { data [data_length] = '\0';
  }
}
  return data;
  }
  char* trim (char* str)
  { if (!str)
    { return '\0';
    }
    if (*str)
    { return str;
    }
  while (*str != '\0' && isspace (*str))
  { str++;
    }
    return str;
  }
  char* rtrim (char *str)
  { if(!str)
  { return '\0';
  } if (!*str)
  { return str;
  }
  char * ind = str + strlen (str) - 1;
```

```
end --; }
*(end+1) = '\0';
return 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 parse_int(char* str){
char* endptr;
int value = strtol(str, &endptr, 10);
if(endptr == str || *endptr != '\0'){
    exit(EXIT_FAILURE);
}
    return value;
}
```