Strathmore
U N I V E R S I T Y

FACULTY OF INFORMATION TECHNOLOGY

BACHELOR OF SCIENCE IN INFORMATICS AND COMPUTER SCIENCE

INTRODUCTION TO PROGRAMMING WITH C++

SEMESTER PROJECT

Presentation date: Reading week

Problem Statement

The current Computer Science freshmen are in three groups, A, B and C respectively. The gender ratios in these groups are as shown below.

ICS Group	Number of Male Students	Number of female Students	Totals
ICS A	19	11	30
ICS B	16	12	28
ICS C	36	19	55
Totals	**71**	**42**	**113**

Assuming the Faculty has decided to merge the three groups into **two**, balancing the gender ratios as shown below. Write a C++ programme that will assist them in achieving their goal.

ICS Group	Number of Male Students	Number of female Students	Totals
ICS A	36	21	57
ICS B	35	21	56
Totals	**71**	**42**	**113**

Provided:

1. 3 CSV files having all the names of the students with their admission numbers and gender.

Required:

1. Read all the student's details from the given files and import them into your programme. **(5 Marks)**
2. Develop a perfect shuffle algorithm (coded) that will give the output in the table above. **(10 Marks)**
3. Print out the final lists into two separate CSV files having ICS A and B. **(3 Marks)**
4. Include lucrative features into your programme such as options, presentable output and generally a well-structured system. **(2 Marks)**

Test your programme before the presentations to avoid disappointments.

All the best! ☺