Beihang University
School of General Engineering

Beijing, September 29nd, 2020
Wei Lin and Yida Ding

# Computer Science and Programming Homework September 29nd, 2020

**Task 1** ***Operators and branches***

As a new comer in Beihang University, it's necessary for you to know the grade point formula of a course ($GP$) and the grade point average formula of a student ($GPA$):

$$GP = \begin{cases} 4 - \frac{3(100-X)^2}{1600}, & (60 \leq X \leq 100) \\ 0, & (X < 60) \end{cases} \tag{1}$$

$$GPA = \frac{\sum GP * credit}{\sum credit} \tag{2}$$

1. Suppose Peter gets 94 points in ICSP course (4 *credits*) and 55 points in Linear Algebra (1 *credits*), write a python program to compute the grade point of ICSP and Linear Algebra.

2. Write a python program to compute the grade point average ($GPA$) of Peter.

3. If the $GPA$ of a student is higher than 3.5 and he doesn't fail (score less than 60) any course , he can receive a scholarship of 3000 yuan. If the $GPA$ of a student is higher than 3 and he fails at most one course, he can receive a scholarship of 1000 yuan. If the $GPA$ of a student is below 3, he won't receive any scholarship. How much will Peter obtain ?