Hypothesis Test:

Let the means of the app's group be the μ1 and the other one is μ2.

Ho: μ1=μ2	Ha: μ1>μ2

For Class A:

	Class A Test 1	Class A Test 2
Count	120	102
Max	91.7	92.5
Min	76.5	75.9
Mean	85.44117647	85.53921569
Median	85.45	85.45
Mode	83.5	87.1
1st Quartile	83.3	83.425
3rd Quartile	87.275	87.375
IQR	3.975	3.95
Variance	8.194579008	8.443952326

Test statistic =
$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\dfrac{s_1^2}{n_1} + \dfrac{s_2^2}{n_2}}}$$

$\mu_1 - \mu_2 = 0$ as we expect $\mu_1 = \mu_2$

n1 = sample size= 102

$\bar{x}_1$ = sample1 mean=85.44117647

s1^2 = sample1 variance=8.194579008

n2 = sample size= 102

$\bar{x}_2$ = sample1 mean=85.53921569

s2^2 = sample2 variance=8.443952326

Test statistic =

-0.09/ 1.294 = -0.069

Set the alpha level =0.05

Based on the T-table(degree of freedom 101), we find that the p value = 1.66

P < a , we reject the null hypothesis

In summary, For class A, we say that the usage of the apps have significant impact on the test score students received.

For Class B

	Class B Test 1	Class B Test 2
Max	86.6	87.4
Min	78.1	78.7
Mean	82.875	83.175
Median	82.3	82.95
Mode	84.8	82.3
1st Qunatile	81	81.35
3rd Qunatile	84.8	85
IQR	3.8	3.65
Count	108	108
Vairance	5.123171296	5.132060185

Test statistic =
$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\dfrac{s_1^2}{n_1} + \dfrac{s_2^2}{n_2}}}$$

$\mu_1 - \mu_2 = 0$ as we expect $\mu_1 = \mu_2$

n1 = sample size= 108

$\bar{x}_1$= sample1 mean=82.875

$s1^2$ = sample1 variance=5.123

n2 = sample size= 108

$\bar{x}_2$= sample1 mean=83.175

$s2^2$ = sample2 variance=5.132

Test statistic =-0.3/0.3 = -1

Set the alpha level =0.05

Based on the T-table(degree of freedom 107), we find that the p value = 1.66

P > a , we reject the null hypothesis

In summary, For class b, we say that the usage of the apps have significant impact on the test score students received.