### **GRADEBOOK PROGRAM**

#### Introduction

The gradebook program was written to provide a convenient place for a teacher to store the scores obtained by students on classroom tests. Up to 40 students may be recorded and a maximum of 10 test scores recorded. An 11<sup>th</sup> test result area is available for the teacher to automatically record a weighted composite score of the previously recorded scores. An editing option exists to delete a student in the case of a dropout or transfer out of the class. The teacher may also analyze each test and obtain a transformation of the raw test score to a z score (mean of zero and standard deviation of 1), a T score (mean of 50 and a standard deviation of 10) and a percentile rank score. The analysis of a test also permits the teacher to specify "cutting" scores for the automatic assignment of letter grades to the students. Grades may be assigned on a 5 point scale (A, B, C, D or F) or on the basis of a 12 point scale (A, A-, B+, B, B-, C+, C, C-, D+, D, D- or F.) The teacher can, of course, cancel this option and directly place grades in the column provided in the gradebook. The gradebook can be saved and re-opened at the pleasure of the student. The teacher can also create individual student reports for distribution to the students or create a class list of all student scores.

#### **The Gradebook Form**

Shown below is the gradebook form which appears when the user selects Grade Book from the Measurement menu:

Gradebook										_ 0	×
Files Edit Compute Reports											
VOUD OD (DEDOOK FOD	Last Name	First Name	M.I.	Test 1 Raw	Test 1 z	Test 1 T	%ile Rank	Grade 1	Test 2 Raw	Test 2 z	-
YOUR GRADEBOOK FOR:											
File: FileNameEdit											
Directory (click folder icon to change)											
C:\Documents and Settings\wgmiller\My Documents\Laz5											
	I										
cansas.MAT											
LazStats.exe											
LazStats.ico	L										
LazStatsSetup.iss											
Options.txt											
	L										
	L										
Land Burketing											
Start New Name Protection:											
Evit O Turn OFF											-
										<u> </u>	

A sample grade book is included in the sample data files for LazStats. If you click on the Files menu, you can select this file and see the results below:

Gradebook										
Files Edit Compute Reports										
	Last Name	First Name	M.I.	Test 1 Raw	Test 1 z	Test 1 T	%ile Rank	Grade 1	Test 2 Raw	Test 2 z 🔺
YOUR GRADEBOOK FOR:	Bohr	Neil		100	1.315561	63.15561	97.22	А	20	1.45209
File:	Einstein	Albert		99	1.285006	62.85006	91.67	А	18	1.11042
	Gershwin	George		88	0.948902	59.48902	80.56	А	10	-0.25625
Directory (click folder icon to change)	Gates	William		77	0.612797	56.12797	69.44	в	17	0.93959
C:\Documents and Settings\wgmiller\My Documents\LazS	Obama	Michelle		66	0.276692	52.76692	52.78	в	19	1.28126
·	Miller	Bill		55	-0.05941	49.40587	36.11	С	11	-0.0854:
cansas.MAT	Limbaugh	Rush		20	-1.12883	38.71163	19.44	D	1	-1.79376
index.htm	Palin	Sarah		10	-1.43438	35.65613	13.89	D	2	-1.6229
LazStats.ico	Binladin	Osama		0	-1.73993	32,60063	0.00	F	3	-1.45209
LazStats.ini	Grobin	Josh		70	0.398912	53.98912	61.11	в	7	-0.76875
Options.txt	Obama	Barock		88	0.948902	59.48902	80.56	А	13	0.25625
	Benton	Barbara		70	0.398912	53.98912	61.11	в	15	0.59792
	Moreland	Robert		65	0.246137	52.46137	47.22	в	10	-0.25625
	Edwards	John		24	-1.00661	39.93382	25.00	С	16	0.76875
	Kunstler	Michael		62	0.154472	51.54472	41.67	С	8	-0.59792
	Faraday	James		8	-1.49549	35.04503	8.33	F	9	-0.42708
	Kent	Clark		88	0.948902	59.48902	80.56	А	17	0.93959
	McClain	John		35	-0.67051	43.29487	30.56	С	11	-0.0854:
Start New Name Protection:										
C Turn ON										-
Exit © Turn OFF	•									

Notice that there is an area which displays the current file name. Grade Book files have a suffix label of .GBK. The current example file name is textgradebook.GBK and contains three tests for 18 students. There is also a weighted composite of scores toward the end of the data grid. Drag the "slider" bar to the right to see or record scores. You will notice a "Name Protection" box which can be turned on or off. If you turn it on, the student names will stay visible when you slide the test score grid to the right.

## The Compute Analysis Option

There are two options under the Compute menu. The first is to analyze a test and the second is to obtain a weighted composite of two or more recorded test scores. If the user selects the analysis option, the following forms appears:

Which test (nu	mber)	×
TEST:		
1		
	<u> </u>	🔀 Cancel
No. of Test Iten	ns or maximum s	core possi 🗴
Number:		
100		
	<u> </u>	🔀 Cancel

The first form is used to enter the number of the test to analyze. The second form is to indicate the number of items in the test (or maximum test score possible.) This information is used to estimate the test reliability using the Kuder-Richardson formula 21 and to identify the top score when assigning grades to the students. Once these two forms are entered with the required data, the form below appears:



The user can use this form to assign student grades on the basis of a raw score (typical) or on the basis of one of the transformation scores. The user can also assign grades on either a 5 point or a 12 point scale. First click the type of score to use. Next click the button for the number of letter grades to use. At this point the maximum score will be shown in the column marked "Top Score". The user then clicks on the corresponding space under the "Down Through" column and enters the low score for the first grade category. The "Enter" key must be pressed to record this low score. When the low score is entered, the program calculates the number of students that will receive that grade. The top score for the next grading category will also appear automatically in the "Top Score" column. This process is repeated for each grade category. When the last grade category has been entered, the user may then click the "Compute" button to automatically record the obtained grades in the Grade Book.

The following image shows an example of grading the first test in the example grade book. Notice that the grid on the far left contains the sorted scores in one column and the frequency of those scores in the second column. This provides a useful guide when selecting the cutting scores for the grades.



When you click the compute button, the grades are automatically recorded in the gradebook. The form above will also show the grades given to each score. Upon clicking the Return button, the following results are displayed:

Test Analysis Results Mean = 56.94, Variance = 1071.114, Std.Dev. = 32.728

Kuder-Richardson Formula 21 Reliability Estimate = 0.9870

# PERCENTILE RANKS

Score Value Frequency Cum.Freq. Percentile Rank

0.000	1.00	1.00	2.78	
8.000	1.00	2.00	8.33	
10.000	1.00	3.00	13.89	
20.000	1.00	4.00	19.44	
24.000	1.00	5.00	25.00	
35.000	1.00	6.00	30.56	
55.000	1.00	7.00	36.11	
62.000	1.00	8.00	41.67	
65.000	1.00	9.00	47.22	
66.000	1.00	10.00	52.78	
70.000	2.00	12.00	61.11	
77.000	1.00	13.00	69.44	
88.000	3.00	16.00	80.56	
99.000	1.00	17.00	91.67	
100.000	1.00	18.00	97.22	

