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| **Computer Simulation**  **(Spring 2017)** |

 

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| ***Assignment Number:*** | **8** |
| ***Due Date*** |  |
| ***Your Name:*** |  |
| ***Your Score/Maximum Score:*** | **/100** |

***Problems:***

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| **Problem A**   1. **Write a MATLAB function ‘myrolls(n)’ that rolls n dice and returns ‘1’ if they all have the same face value, otherwise it returns ‘0’. For example, if n = 2 and the result is ‘5’ and ‘5’, the function returns 1 but if the result is ‘2’ and ‘3’, then it returns 0.** 2. **Write another program myrolls\_main that gets the value n from the user and tries calling the above function 100 times and counts the number of the matches.**   **Hint: Initially test your program for n = 2.** |
| **Problem B**  **Write a program that reads grades of students from a file (named ‘grades.txt’) and then prints out the mean, median and standard deviation of the read grades. The file is in ASCII and attached to the email.** |

1.)

function y= myrolls(n)

rolls=randi([1 6],1,n);

for i=2:n

if rolls(i) ~= rolls(i-1)

y=0;

return;

end

end

y=1;

end

>> myrolls(2)

ans =

0

>> myrolls(2)

ans =

0

>> myrolls(2)

ans =

0

>> myrolls(2)

ans =

0

>> myrolls(2)

ans =

0

>> myrolls(2)

ans =

1

2.)

clear all

clc

file=fopen('Grades.txt','r');

x=fscanf(file,'%d');

disp(x)

avg=mean(x);

fprintf('The mean is %d \n',avg);

z=var(x);

fprintf('The variance is %d \n',z);

M=mode(x);

fprintf('The mode is %d \n',M);

l=median(x);

fprintf('The median is %d \n',l);

fclose(file);

86

91

65

77

90

82

73

88

69

74

95

89

66

91

The mean is 8.114286e+01

The variance is 1.053626e+02

The mode is 91

The median is 84