Algorithms and Data Structures

Module 2

Assignment 4

Fast exponentiation

Adigeev Mikhail Georgievich

mgadigeev@sfedu.ru

adimg@yandex.ru

Task

Develop a program that raises the given 1st number (base) to the given power (2nd number) modulo the 3rd number. Your program should implement the fast exponentiation algorithm given in lecture 10.

Input: the integer numbers x, n, m.
Output: integer number $y = x^n \mod m$.

The complete implementation of the assignment gives you 4 pts.