

## COMPUTER SCIENCE 1A P04 DESIGN

### Problem Description

This program captures in values for P and r, applies the formula and sends the output (A and r) to the standard output.

$$A = P(1 + r)$$

- A is the final amount (a real number)
- P is the initial amount (a real number)
- r is the interest rate (a real number)

### Input & Output

Input	
Decimal Value (non-negative)	Standard Input Stream
Decimal Value (non-negative)	Standard Input Stream
Decimal Value (non-negative)	Standard Input Stream
Output	
Binary Number (from decimal)	Standard Output Stream
Binary Number (from decimal)	Standard Output Stream
Binary Number (from decimal)	Standard Output Stream

### Data Format

<i>Identifier</i>	<i>Data Type</i>	<i>Description</i>
dblAmountP	Double	Base 10 number
dblInterestR	Double	Base 10 number
dblFinalAmount	Double	Base 10 number

### Pseudo Code

dblAmountP ← Input dblInterestR

← Input dblFinalAmount ← Input

$\text{dblFinalAmount} \leftarrow$   
 $\text{dblFinalAmount} + \text{dblAmountP} \times$   
 $(1 + \text{dblInterestR})$

$\text{Output} \leftarrow \text{dblAmountP}$   
 $\text{Output} \leftarrow \text{dblInterestR}$   
 $\text{Output} \leftarrow \text{dblFinalAmount}$

### UML Activity Diagram

