

Logic Specification Template Alta Maestros

23/03/2017

0.1

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# Logic Specification Template

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| Student | Juan Alberto Gutierrez Canto | | Date | 23/03/17 |
| Program | Alta Maestros | | Program # | N/A |
| Instructor | PEBM | | Language | C |
| Object | N/A | | Function | alta\_maestros() |
| **INCLUDES:**  **TYPE DEFINITIONS:**  **Declaration:** | | #include <cstdio>  #include <cstdlib>  #include <iostream>  #include <string>  #include “sqlite3.h”  Using namespace std; | | |
|  | | sqlite3 \*db | | |

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| **Reference:** |  |

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| Logic reference numbers | Program logic, in pseudocode |
| 1 | string ap\_materno |
|  | string ap\_paterno |
|  | string nombre |
|  | string fecha\_nac |
|  | string direccion |
|  | string telefono |
|  | string email |
|  | int cant\_materias |
|  | int cant\_mat\_dar |
|  | string materia |
|  | string id\_materia |
|  | int status=1 |
|  | mientras status != 0 |
|  | imprime menu para pedir datos al usuario |
|  | lee nombre |
|  | lee apellido paterno |
|  | lee apellido materno |
|  | lee fecha nacimiento |
|  | lee direccion |
|  | lee telefono |
|  | lee email |
|  | se imprimen los datos leídos y se preguntan si son   correctos 0)si 1)no |
|  | leer status |
|  | se llama a la función insert\_maestros(nombre,ap\_paterno,ap\_materno,fecha\_nac,direccion, telefono, email) |
|  | escribe que la lista de materias con sus id se encuentra en la carpeta, y se pregunta si quiere actualizarla |
|  | leer status |
|  | si desea actualizar se va a la función actualizar\_materias() |
|  | se pide la cantidad de materias que va a tener el maestro |
|  | leer cant\_materias |
|  | mientras cant\_materias != 0 |
|  | pide el id de la materia |
|  | leer id\_materia |
|  | pide si la impartira o no |
|  | leer status |
|  | se llama a la función insert\_mtr\_mst(id\_maestro,   id\_materia, status) |
|  | se llama a la función query\_maestros() y se muestra los datos introducidos. |

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| Object | N/A | | Function | actualizar\_materias() |
| **INCLUDES:**  **TYPE DEFINITIONS:**  **Declaration:** | | #include <cstdio>  #include “sqlite3.h”  Using namespace std; | | |
|  | | sqlite3 \*dp | | |

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| **Reference:** |  |

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| Logic reference numbers | Program logic, in pseudocode |
| 1 | char \*sql |
|  | char \*err=0 |
|  | int rc |
|  | const char\* data = "Materias actualizadas\n"; |
|  | se asigna a pfile=fopen(“materias\_disponibles.txt”,”w”) para abrir el archivo |
|  | se asigna la operación a sql=”SELECT \* from MATERIAS”); |
|  | se asigna a rc=sqlite3\_exec(db,sql,print\_archivo,(void\*)data, &err); |
|  | si rc!= SQLITE\_OK entonces |
|  | se imprime “SQL error %s”,err |
|  | sqlite3\_free(err) |
|  | si no |
|  | se imprime “Nueva lista disponible” |
|  | se cierra el documento con fclose(pfile); |

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| Object | N/A | | Function | static int print\_archivo() |
| **INCLUDES:**  **TYPE DEFINITIONS:**  **Declaration:** | | #include <cstdio>  #include “sqlite3.h”  Using namespace std; | | |
|  | | void \*data | | |
|  | | int argc | | |
|  | | char \*\*argv | | |
|  | | char \*\*az\_col\_name | | |

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| **Reference:** |  |

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| Logic reference numbers | Program logic, in pseudocode |
| 1 | int i |
|  | imprime en archivo con fprintf(pfile,”\t\t%s\n”,(const char\*)data); |
|  | para i=0 mientras i<argc en i++ |
|  | fprintf(pfile,”%s\t“,argv[i] ?argv[i]:”NULL”); |
|  | fprintf(pfile,”\n”); |
|  | return 0; |

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| Object | N/A | | Function | void insert\_maestros() |
| **INCLUDES:**  **TYPE DEFINITIONS:**  **Declaration:** | | #include <cstdio>  #include “sqlite3.h”  Using namespace std; | | |
|  | | sqlite3 \*db | | |
|  | | string id\_maestro | | |
|  | | string nombre | | |
|  | | string ap\_paterno | | |
|  | | string ap\_materno | | |
|  | | string fecha\_nac | | |
|  | | string direccion | | |
|  | | string telefono | | |
|  | | string email | | |

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| **Reference:** |  |

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| Logic reference numbers | Program logic, in pseudocode |
| 1 | char \*sql |
|  | char \*err |
|  | int rc |
|  | asigna a sql=”INSERT INTO MAESTROS (Id\_Ma, Nombre, ApPaterno, ApMaterno, FNacimiento, Direccion, Telefono, Email) “ \ “VALUES (‘“ \id\_materia \ ”’,’” \ nombre \ ”’,’” \ ap\_paterno \ ”’,’” \ ap\_materno \ ”’,’” \ fecha\_nac \ ”’,’” \ direccion \ ”’,’” \ telefono \ ”’,’” \ email \ “‘);”; |
|  | se asigna a rc=sqlite3\_exec(db, sql, callback, 0, &err); |
|  | si rc != SQLITE\_OK |
|  | printf(“SQL error: %s\n”,err); |
|  | sqlite3\_free(err); |
|  | si no |
|  | printf(“Valores ingresados correctamente\n”); |

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| Object | N/A | | Function | void insert\_mtr\_mst() |
| **INCLUDES:**  **TYPE DEFINITIONS:**  **Declaration:** | | #include <cstdio>  #include “sqlite3.h”  Using namespace std; | | |
|  | | sqlite3 \*db | | |
|  | | string id\_materia | | |
|  | | string id\_maestro | | |
|  | | int status | | |

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| **Reference:** |  |

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| Logic reference numbers | Program logic, in pseudocode |
| 1 | char \*sql |
|  | char \*err |
|  | asigna a sql=”INSERT INTO IMPARTE (ID\_Maestro, ID\_Materia, Status) “ \ “VALUES (‘“ \ id\_maestro ”’,’” \ id\_materia ”’,’” \ status “‘);”; |
|  | se asigna a rc=sqlite3\_exec(db, sql, callback, 0, &err); |
|  | si rc != SQLITE\_OK |
|  | printf(“SQL error: %s\n”,err); |
|  | sqlite3\_free(err); |
|  | si no |
|  | printf(“Valores ingresados correctamente\n”); |

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| Object | N/A | | Function | void query\_maestros() |
| **INCLUDES:**  **TYPE DEFINITIONS:**  **Declaration:** | | #include <cstdio>  #include “sqlite3.h”  Using namespace std; | | |
|  | | sqlite3 \*db | | |
|  | | string id\_maestro | | |

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| **Reference:** |  |

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| --- | --- |
| Logic reference numbers | Program logic, in pseudocode |
| 1 | char \*sql |
|  | char \*err |
|  | int rc |
|  | const char\* data = "Datos Maestro" |
|  | asigna a sql=”SELECT \* FROM MAESTROS WHERE Id\_Ma =’”\id\_maestro”’);”; |
|  | se asigna a rc=sqlite3\_exec(db, sql, callback, (void\*)data, &err); |
|  | si rc != SQLITE\_OK |
|  | printf(“SQL error: %s\n”,err); |
|  | sqlite3\_free(err); |
|  | si no |
|  | printf(“Valores ingresados correctamente\n”); |
|  | data = "Con las siguientes materias"; |
|  | asigna a sql=”SELECT \* FROM IMPARTE WHERE Id\_Maestro =’”\id\_maestro”’);”; |
|  | se asigna a rc=sqlite3\_exec(db, sql, callback, (void\*)data, &err); |
|  | si rc != SQLITE\_OK |
|  | printf(“SQL error: %s\n”,err); |
|  | sqlite3\_free(err); |
|  | si no |
|  | printf(“Valores ingresados correctamente\n”); |

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| Object | N/A | | Function | static int callback() |
| **INCLUDES:**  **TYPE DEFINITIONS:**  **Declaration:** | | #include <cstdio>  #include “sqlite3.h”  Using namespace std; | | |
|  | | void \*data | | |
|  | | int argc | | |
|  | | char \*\*argv | | |
|  | | char \*\*az\_col\_name | | |

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| **Reference:** |  |

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| --- | --- |
| Logic reference numbers | Program logic, in pseudocode |
| 1 | int i |
|  | imprime en pantalla con printf( "%s:\n ", (const char\*)data); |
|  | para i=0 mientras i<argc en i++ |
|  | printf("%s = %s\n", azColName[i], argv[i] ? argv[i] : "NULL"); |
|  | printf(”\n”); |
|  | return 0; |