[[1]](#footnote-1)

Proyecto Sistema de facturación de Foodtrucks Por: Jhonathan Pizarra

*Abstract*—Billing systems are found in the food businesses. In recent years, food businesses called foodtrucks have increased exponentially, however, it is important the computerized management of business billing transactions, both with users and with suppliers. It is necessary to design a database that will help us with this topic

***Resumen***—**Los Sistemas de facturación se encuentran en los negocios de comidas. En los últimos años, los negocios de comida denominados foodtrucks se han incrementado exponencialmente, sin embargo, es importante el manejo informático de las transacciones de facturación del negocio, tanto con los usuarios como con los proveedores. Se necesita diseñar una base de datos que nos ayude con esta temática.**

# INTRODUCTION

P

ower Designer es una herramienta para el análisis, diseño inteligente y construcción sólida de una base de datos y un desarrollo orientado a modelos de datos a nivel físico y conceptual, que da a los desarrolladores Cliente/Servidor la más firme base para aplicaciones de alto rendimiento. Existen además, otras herramientas que usaré para crear el proyecto entre ellas será SQL Server, y NetBeans, lo que se pretende hacer con el presente proyecto es enlazar conocimientos adquiridos de la materia *“Bases de Datos 1*” y “*Programación Avanzada*” para crear una aplicación que nos ayude a resolver el problema propuesto, “*Un sistema de facturación*” Rápidamente explicaré el uso y características de cada programa en este informe, aun así es posible que sienta “lagunas” y estaría en lo cierto, porque el presente informe no pretende enseñar conocimientos básicos de Java o PowerDesginer, más bien pretende enseñar cómo usar esos programas en este proyecto. [1]

# POWER DESIGNER

PowerDesigner es una herramienta para el análisis, diseño inteligente y construcción sólida de una base de datos y un desarrollo orientado a modelos de datos a nivel físico y conceptual, que da a los desarrolladores Cliente/Servidor la más firme base para aplicaciones de alto rendimiento. Comenzamos por crear un nuevo Modelo, para eso abrimos el programa y damos clic en la pestaña “File” y escogemos la opción “Nuevo Modelo”. Obsérvese la figura 1.

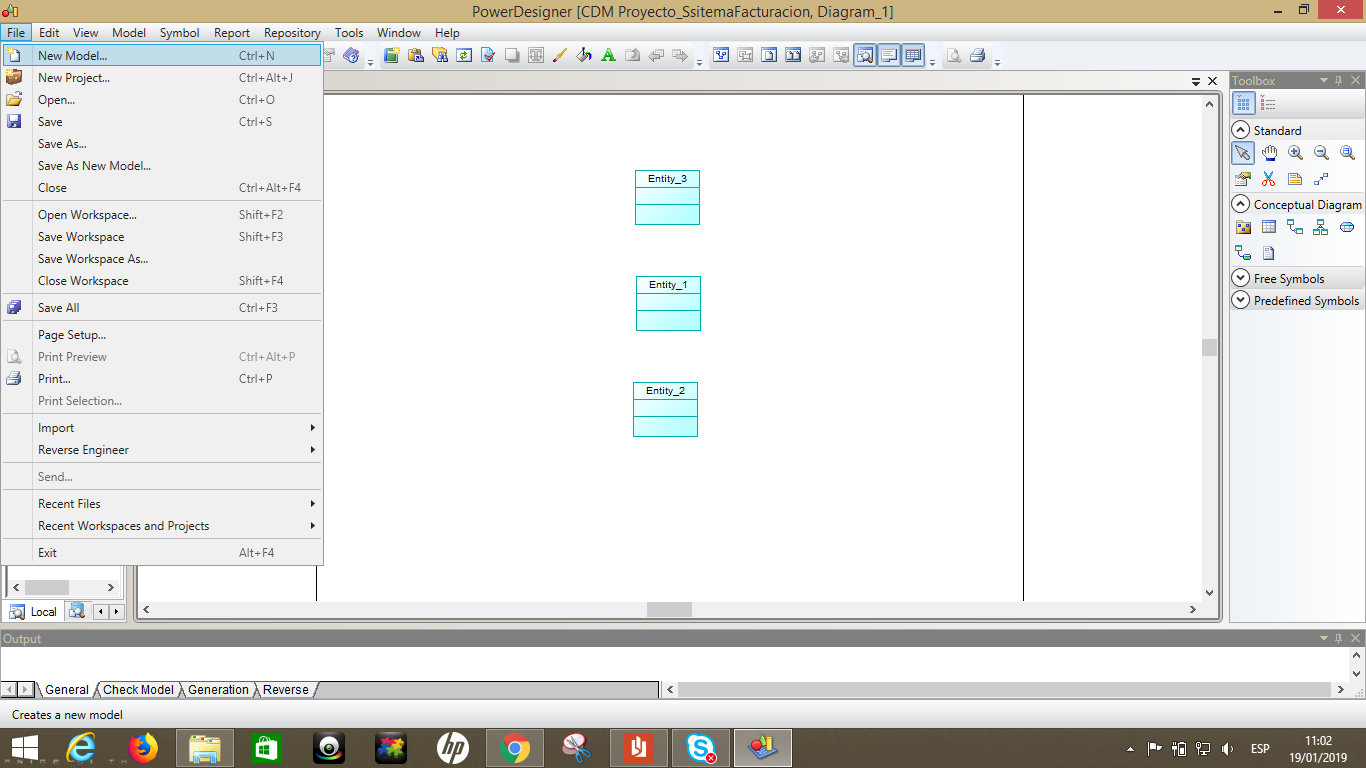


Fig. 1 Creacion de modelos

Escogemos en la sección información la opción “Conceptual Data” y enseguida le damos un nombre a nuestro modelo. Lo que habremos hecho es generar un espacio de trabajo el cual contendrá un diagrama. Pero antes nos es necesario hacer todo tal y como se pide en la Figura 2.

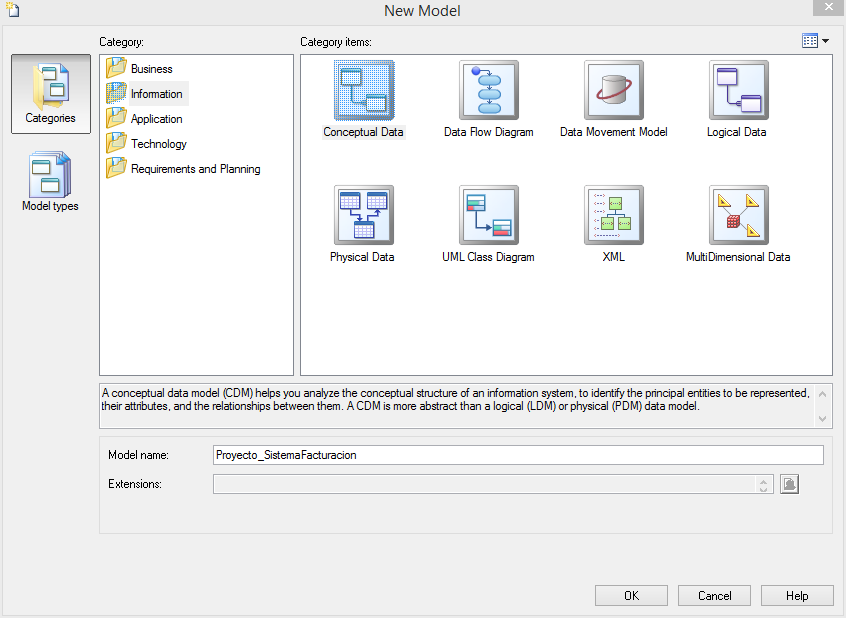


Fig. 2 Selección de Modelo

Luego de ello, aparecerá un espacio de trabajo, veremos dos cosas, a la parte izquierda un conjunto de accesorios (los cuales usaremos en toda la plantilla) y la derecha veremos en cambio todos los objetos existentes dentro de esta. Obsérvese la figura 3 y 4 respectivamente

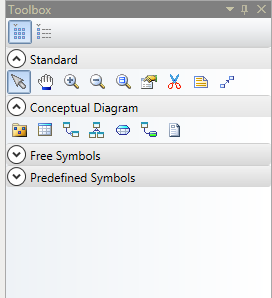


Fig. 3 Presentación de Herramientas

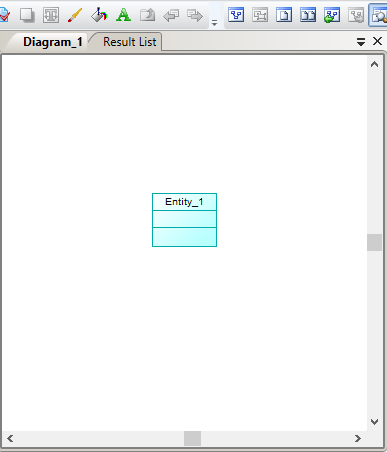


Fig. 4 Plantilla de trabajo

Si observamos el centro, vemos un cuadro “Entidad”, esa mismas fue arrastrada desde el componente “*enity”* de la figura 3, misma que está ubicada en el panel de *“Conceptual Diagrama”.* Lo que necesitamos hacer es doble clic en ese recuadro entity para que se nos abra una ventana como el de la figura 5.

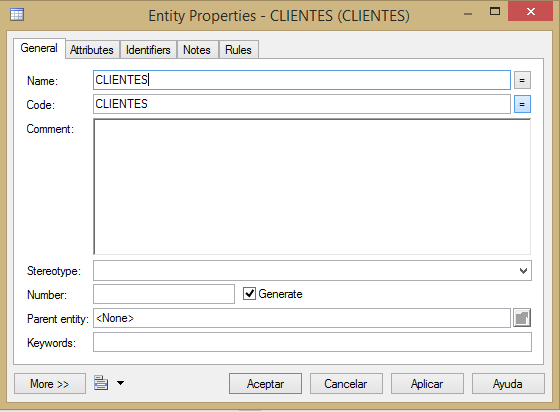


Fig. 5 Pestaña General

Vemos varias pestañas, en la general describimos el nombre, y podemos agregar un comentario sobre esta entidad, en mi caso solo le pondré el nombre de esta entidad y me desplazaré a la pestaña atributos, Figura 6

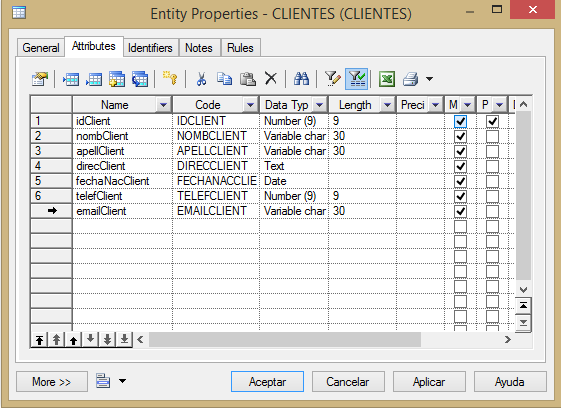


Fig. 6 Pestaña Atributos

En esta pestaña atributos definimos nombres de los atributos, tipos de datos de los mismos, algunas características adicionales como sería la longitud, la PK, y si son “*Mandatory*”. Y haremos lo mismo para con cualquier entidad que tengamos.

Luego de esto, nos desplazaremos a la pestaña “*Identifiers*” Figura 7.

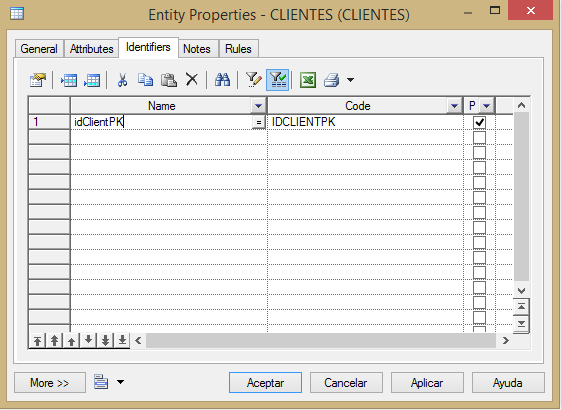


Fig.7 Pestaña Identifiers

Aquí lo que se hace es enfatizar a nuestra Pk, y listo, las siguietens pestañas son solo para agragar notas con respecto a esta entidad. Si pulsamos aceptar, y luego de haber establecido todo lo necesario en las pestañas anteriores, veremos una generacion de entidad/es como la de la/s figura 8 y 9.

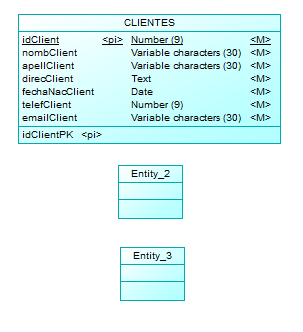


Fig. 8 Entidad diseñada

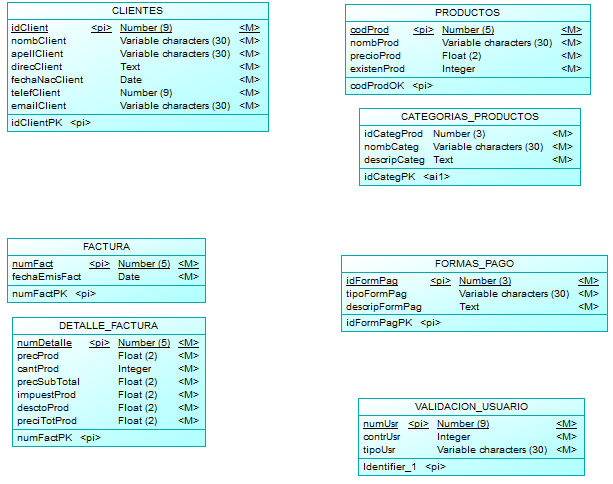


Fig. 9 Entidades diseñadas

Ahora crearemos lo que sería la relación, de hecho este diseño de modelo se denomina Modelo Entidad-Relación porque creamos dependencias y establecemos condiciones. Si hablamos de un sistema entonces hablamos de conexiones de cualquier forma, por lo que usando una de las herramientas (Que fueron presentadas en la figura 3) denominada “*Relationship*”, conectamos dos entidades desde sus centros, estas entidades deben tener relación una con otra y entonces podemos darle cardinalidades véase la figura 10:

* 1 a 1
* 1 a n
* n a 1
* n a n

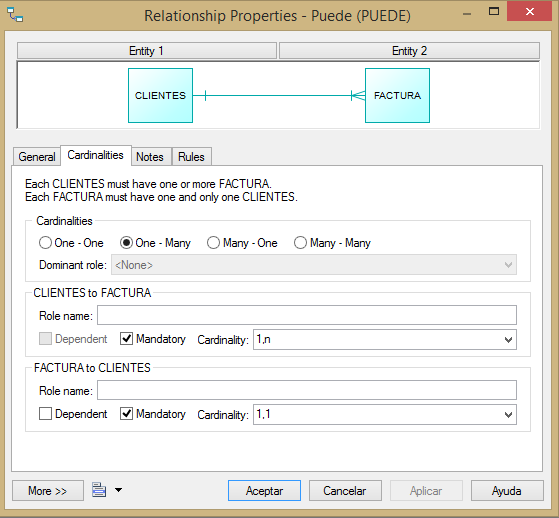


Fig. 10 Relacion de cardinalidad

Una vez hayamos hecho las relaciones habremos terminado con el primer inciso del proyecto, que era crear el modelo Entidad-Relación. Nos quedaría algo parecido a la figura 11.

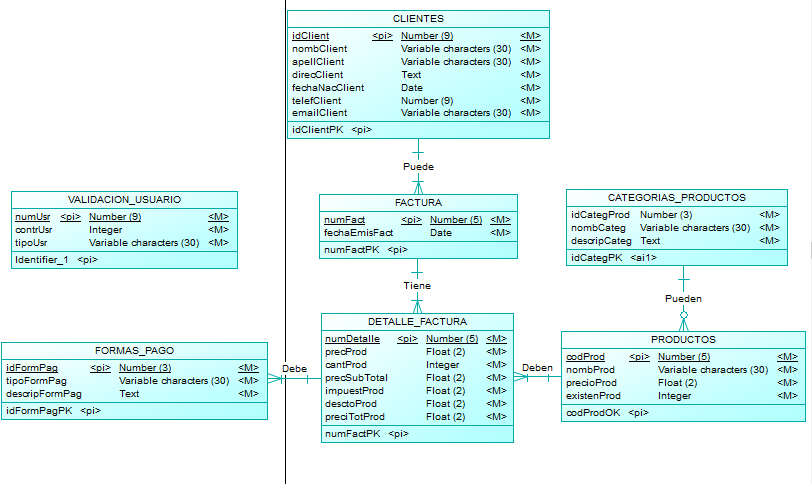


Fig. 11 Modelo Entudad-Relacion

## Script Tabla

(Próxoma entrega)

## Script Inserción Datos

(Próxima entrega)

# Some Common Mistakes

The word “data” is plural, not singular. The subscript for the permeability of vacuum µ0 is zero, not a lowercase letter “o.” The term for residual magnetization is “remanence”; the adjective is “remanent”; do not write “remnance” or “remnant.” Use the word “micrometer” instead of “micron.” A graph within a graph is an “inset,” not an “insert.” The word “alternatively” is preferred to the word “alternately” (unless you really mean something that alternates). Use the word “whereas” instead of “while” (unless you are referring to simultaneous events). Do not use the word “essentially” to mean “approximately” or “effectively.” Do not use the word “issue” as a euphemism for “problem.” When compositions are not specified, separate chemical symbols by en-dashes; for example, “NiMn” indicates the intermetallic compound Ni0.5Mn0.5 whereas “Ni–Mn” indicates an alloy of some composition NixMn1-x.

Be aware of the different meanings of the homophones “affect” (usually a verb) and “effect” (usually a noun), “complement” and “compliment,” “discreet” and “discrete,” “principal” (e.g., “principal investigator”) and “principle” (e.g., “principle of measurement”). Do not confuse “imply” and “infer.”

Prefixes such as “non,” “sub,” “micro,” “multi,” and “ultra” are not independent words; they should be joined to the words they modify, usually without a hyphen. There is no period after the “et” in the Latin abbreviation “*et al.*” (it is also italicized). The abbreviation “i.e.,” means “that is,” and the abbreviation “e.g.,” means “for example” (these abbreviations are not italicized).

A general IEEE styleguide is available at <http://www.ieee.org/web/publications/authors/transjnl/index.html>

# Conclusion

## A conclusion section is not required. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

References and Footnotes

## References

References need not be cited in text. When they are, number citations on the line, in square brackets inside the punctuation. Multiple references are each numbered with separate brackets. When citing a section in a book, please give the relevant page numbers. In text, refer simply to the reference number. Do not use “Ref.” or “reference” except at the beginning of a sentence: “Reference [3] shows ... .” Please do not use automatic endnotes in *Word*, rather, type the reference list at the end of the paper using the “References” style.

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Number footnotes separately in superscripts (Insert | Footnote).[[2]](#footnote-2) Place the actual footnote at the bottom of the column in which it is cited; do not put footnotes in the reference list (endnotes). Use letters for table footnotes (see Table I).

References

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1. G. O. Young, “Synthetic structure of industrial plastics,” in *Plastics,* 2nd ed., vol. 3, J. Peters, Ed. New York: McGraw-Hill, 1964, pp. 15–64.
2. W.-K. Chen, *Linear Networks and Systems.* Belmont, CA: Wadsworth, 1993, pp. 123–135.

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1. J. U. Duncombe, “Infrared navigation—Part I: An assessment   
   of feasibility,” *IEEE Trans. Electron Devices*, vol. ED-11, no. 1, pp. 34–39, Jan. 1959.
2. E. P. Wigner, “Theory of traveling-wave optical laser,” *Phys. Rev*.,   
   vol. 134, pp. A635–A646, Dec. 1965.
3. E. H. Miller, “A note on reflector arrays,” *IEEE Trans. Antennas Propagat*., to be published.

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2. J. H. Davis and J. R. Cogdell, “Calibration program for the 16-foot antenna,” Elect. Eng. Res. Lab., Univ. Texas, Austin, Tech. Memo. NGL-006-69-3, Nov. 15, 1987.

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1. *Name of Manual/Handbook*, *x* ed., Abbrev. Name of Co., City of Co., Abbrev. State, year, pp. *xxx-xxx.*

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[Online]. Available: NEXIS Library: LEXPAT File: DESIGN

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   pp. 585–590.

*Example for papers presented at conferences (unpublished):*

1. D. Ebehard and E. Voges, “Digital single sideband detection for interferometric sensors,” presented at the 2nd Int. Conf. Optical Fiber Sensors, Stuttgart, Germany, Jan. 2-5, 1984.

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   U.S. Patent 4 084 217, Nov. 4, 1978.

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*Examples:*

1. J. O. Williams, “Narrow-band analyzer,” Ph.D. dissertation, Dept. Elect. Eng., Harvard Univ., Cambridge, MA, 1993.
2. N. Kawasaki, “Parametric study of thermal and chemical nonequilibrium nozzle flow,” M.S. thesis, Dept. Electron. Eng., Osaka Univ., Osaka, Japan, 1993.

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2. J. K. Author, “Title of paper,” unpublished.
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*Examples:*

1. A. Harrison, private communication, May 1995.
2. B. Smith, “An approach to graphs of linear forms,” unpublished.
3. A. Brahms, “Representation error for real numbers in binary computer arithmetic,” IEEE Computer Group Repository, Paper R-67-85.

*Basic format for standards:*

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1. IEEE Criteria for Class IE Electric Systems, IEEE Standard 308, 1969.
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**Second B. Author** was born in Greenwich Village, New York City, in 1977. He received the B.S. and M.S. degrees in aerospace engineering from the University of Virginia, Charlottesville, in 2001 and the Ph.D. degree in mechanical engineering from Drexel University, Philadelphia, PA, in 2008.

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Mr. Author’s awards and honors include the Frew Fellowship (Australian Academy of Science), the I. I. Rabi Prize (APS), the European Frequency and Time Forum Award, the Carl Zeiss Research Award, the William F. Meggers Award and the Adolph Lomb Medal (OSA).

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