

*KORYTKO Ineternet CASINO*

solution Concept Document

Version number 1.0

|  |  |
| --- | --- |
| **Submission Date** | *03/25/2012* |
| **Requested By** | *Kyril Bulcha* |
| **Business Owner** | *Alexander Korytko* |
| **Contact Info.** | *Alexander\_Korytko@epam.com* |

# Overview

For the correct creation of a system of analysis at first we need necessary to determine the Data of interest. Our system will receive data from other tables that were structured based on data received from the files. The main objects of our system are:

|  |  |  |
| --- | --- | --- |
| N/N | Data of interest | Description |
| A1 | USERS | User personal information (First name, Last name, gender, day of birth, money balance) |
| A2 | TIMES | Time period for analysis: year, month, quarter (last 12 month) |
| A3 | CURRENCY | Type of users and transactions currency (EUR, USD, RUB and ect.) |
| A4 | LOCATIONS | Regions, subregions, countries |
| A5 | OPERATIONS | Types of transactions – DEPOSIT and WITHDRAWAL |
| A6 | TRANSACTIONS | Full information about operation in one time (owner, time, type and etc.) |

## Business Background

# KORYTKO Internet CASINO provides a selection of the world’s favorite games which can be downloaded for free and play for fun or for real money.

KORYTKO Internet CASINO should always have complete statistics by countries of the total value of deposit and withdrawal money to the users account monthly over the past 12 months. In addition, for each country should be analyzed one the most popular method of depositing and withdrawing money from user account.

## Benefit

# With this our statistics collected by countries can be very easy and fast to identify the most profitable countries for CASINO in each month;

# Managers can always have full statistic about total sum amount of all deposits and withdrawals by countries in each month;

# Using this analyzing system managers of company will be able to more accurately analyze the most frequently used methods of deposit and withdrawal money from the user accounts by countries, regions and subregions.

# Statistics for each month allows very accurately determine the profitability of the company over the last year and will help to predict next year's income in each of 12 months.

# Requirements

## Business Requirements

|  |  |
| --- | --- |
| N/N | Business Requirements |
| B1 | Monthly calculated amount of total Deposits by country |
| B2 | Monthly calculated amount of total Withdrawal by country |
| B3 | Top used methods of deposit money to user account for each country |
| B4 | Top used methods of withdrawal money from user account for each country; |
| B5 | Types of transactions – DEPOSIT and WITHDRAWAL |
| B6 | Full information about operation in one time (owner, time, type and etc.) |
| B7 | Total amount of deposit per day by country should be calculated at the end of each day |
| B8 | Total amount of withdrawal per day by country should be calculated at the end of each day |
| B9 | Total amount of each operation method by country should be calculated at the end of each day |

## Technical Requirements

|  |  |
| --- | --- |
| N/N | Technical Requirements |
| C1 | Statistic should be calculated monthly for each country (at the end of each month); |
| C2 | Statistic period - last 12 month; |
| C3 | High availability/reliability of system: make regular backups ; |
| C4 | User information should consist gender information (Name, surname, gender and countries); |
| C5 | Should be possible to see statistic by month and quarter; |
| C6 | Should be possible to see statistic by country, region and subregion; |
| C7 | The average count of transactions per day is 1000 and around 20 000 per month; |

# Solution Sketch

## Source Tables structure

### *USERS FILE*

|  |  |  |
| --- | --- | --- |
| **Name** | **Data Type** | **Comment** |
| **USER\_ID** | NUMBER (32) | User unique code |
| **FIRST\_NAME** | VARCHAR2 (32) | User First Name |
| **LAST\_NAME** | VARCHAR2 (32) | User Last Name |
| **GENDER** | VARCHAR2 (5) | User Gender (M/F) |
| **YEAR\_OF\_BIRTH** | NUMBER (10) | Users date of birth |
| **COUNTRY** | NUMBER (32) | User country code |
| **BALANCE** | NUMBER (32) | Users current money balance |

### *TIMES FILE*

|  |  |  |
| --- | --- | --- |
| **Name** | **Data Type** | **Comment** |
| **TIMES\_ID** | NUMBER (32) | Time unique code |
| **DATE** | DATE | Day number in month |
| **MONTH** | NUMBER (5) | Month number |
| **MONTH\_DESCRIPTION** | VARCHAR2 (10) | Name of month |
| **QUARTER** | NUMBER (5) | Quarter number (1/2/3/4) |
| **QUARTER\_DESCRIPTION** | VARCHAR2 (5) | Quarter description (first, second, third, fourth) |
| **YEAR** | NUMBER (32) | Year number |
|  |  |  |

### *CURRENCY*

|  |  |  |
| --- | --- | --- |
| **Name** | **Data Type** | **Comment** |
| **CURRENCY\_ID** | NUMBER (32) | Currency unique code |
| **CURRENCY\_NAME** | VARCHAR2 (32) | Currency name (EUR, USD, RUB and etc.) |
| **CURRENCY\_TYPE\_ID** | NUMBER (5) | Convertible currency type or not (1/2) |
| **CURRENCY\_TYPE\_NAME** | VARCHAR2 (32) | Convertible currency type (CONVERTIBLE, NOT CONVERTABLE) |
| **CURRENCY\_SCD\_TYPE\_ID** | NUMBER (32) | Slow Changed Dimension Type 2 code (1,2) |

### *OPERATIONS*

|  |  |  |
| --- | --- | --- |
| **Name** | **Data Type** | **Comment** |
| **OPERATION\_ID** | NUMBER (32) | Operation unique code |
| **OPERATION\_TYPE\_NAME** | VARCHAR2 (32) | Operation name (DEPOSIT / WITHDRAWAL) |
| **DATE** | DATE | Date of operation |
| **OPERATION\_METHOD\_NAME** | VARCHAR2 (5) | Name of method (Credit Cards, Direct Deposit, Check, Webmoney) |
| **OPERATION\_METHOD\_ID** | NUMBER (32) | Operation unique code |
| **OPERATION\_MAX\_AMOUNT** | VARCHAR2 (32) | Max amount of operation |
| **OPERATION\_MIN\_AMOUNT** | NUMBER (32) | Min amount of operation |

### *LOCATIONS*

|  |  |  |
| --- | --- | --- |
| **Name** | **Data Type** | **Comment** |
| **COUNTRY\_ID** | NUMBER (32) | Country unique code |
| **COUNTRY\_DESCRIPTION** | VARCHAR2 (32) | Country Name |
| **COUNTRY\_SHORT\_DESC** | VARCHAR2 (5) | Country abbreviation |
| **SUBREGION** | VARCHAR2 (32) | Subregion Name |
| **SUBREGION\_CODE** | NUMBER (32) | Subregion code |
| **REGION** | VARCHAR2 (32) | Region name |
| **REGION\_CODE** | NUMBER (32) | Region code |

## Logical STAR schema

## 

|  |  |
| --- | --- |
| N/N | LOGICAL SCHEMA |
| C1 | FCT\_TRANSACTION is a fact table. It’s get information from all other dimensions such as USERS, LOCATIONS, TIMES, OPERATIONS, CURENCY |
| C2 | USERS – there is full information about user |
| C3 | TIEMS – List of all possible periods for analysis (Year, month and quarters) |
| C4 | LOCATIONS - List of all possible divisions by countries |
| C5 | OPERATIONS - List of operations types |
| C6 | CURRENCY List of all possible currency name and types |

## Logical SNOW Flakes schema

There are couple more tables, because sometimes we don’t need to use all data from all tables, for example quarters.

### 

|  |  |
| --- | --- |
| N/N | LOGICAL SCHEMA |
| C1 | FCT\_TRANSACTION is a fact table. It’s get information from all other dimensions such as USERS, LOCATIONS, TIMES, OPERATIONS, CURENCY |
| C2 | USERS – there is full information about user |
| C3 | TIEMS – List of year and month |
| C4 | QUARTERS – List of quarters fro TIMES table |
| C5 | LOCATIONS - List of all possible divisions by countries |
| C6 | COUNTRIES – List of Countries for LOCATION TABLE |
| C7 | OPERATIONS - List of operations |
| C8 | OPERATIONS\_TYPES\_METHODS – List of operations methods for OPERATION table |
| C9 | CURRENCY List of all possible currency name and types |

## Summarize Data Plan

