

# Mobile Phone Customer Loyalty/Reward Program: Lantea Group Premium Club



LANTEA GRUPA

PremiumClub(:)

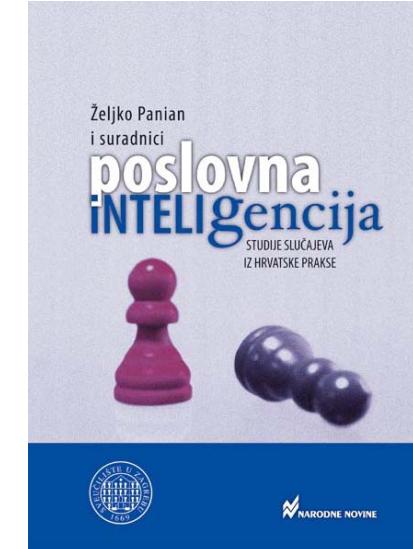
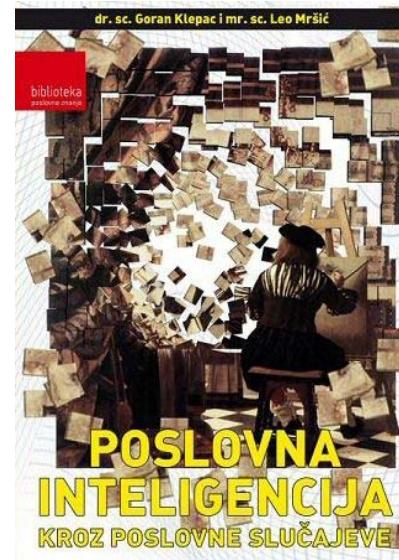
Oracle Open World | San Francisco | 2008

Leo Mrsic | Lantea Group  
Tibor Cuturilo | Tekstilpromet

Session ID S299945 | 22.09.2008. 14:30h Moscone South Rm 300

# Leo Mrsic

- Lantea Group CEO (1000+ employees)
  - largest regional (Croatia, Slovenia, Bosnia, Serbia) textile retail company (170+ stores)
- M.Sc. in data mining
- co-author of two books in data mining (in Croatian)



# Tibor Cuturilo

- Tekstilpromet CIO (300+ employees)
  - largest regional (Croatia, Slovenia, Bosnia, Serbia) textile wholesale
- experience in business system development and implementation
  - largest regional textile wholesale

# Presentation

- Introduction (Leo Mrsic)
  - loyalty programs (history, development)
  - Lantea Group ideas
- Lantea Group PremiumClub (Tibor Cuturilo)
  - technical aspect
  - real life experience
- Conclusion
  - Q&A

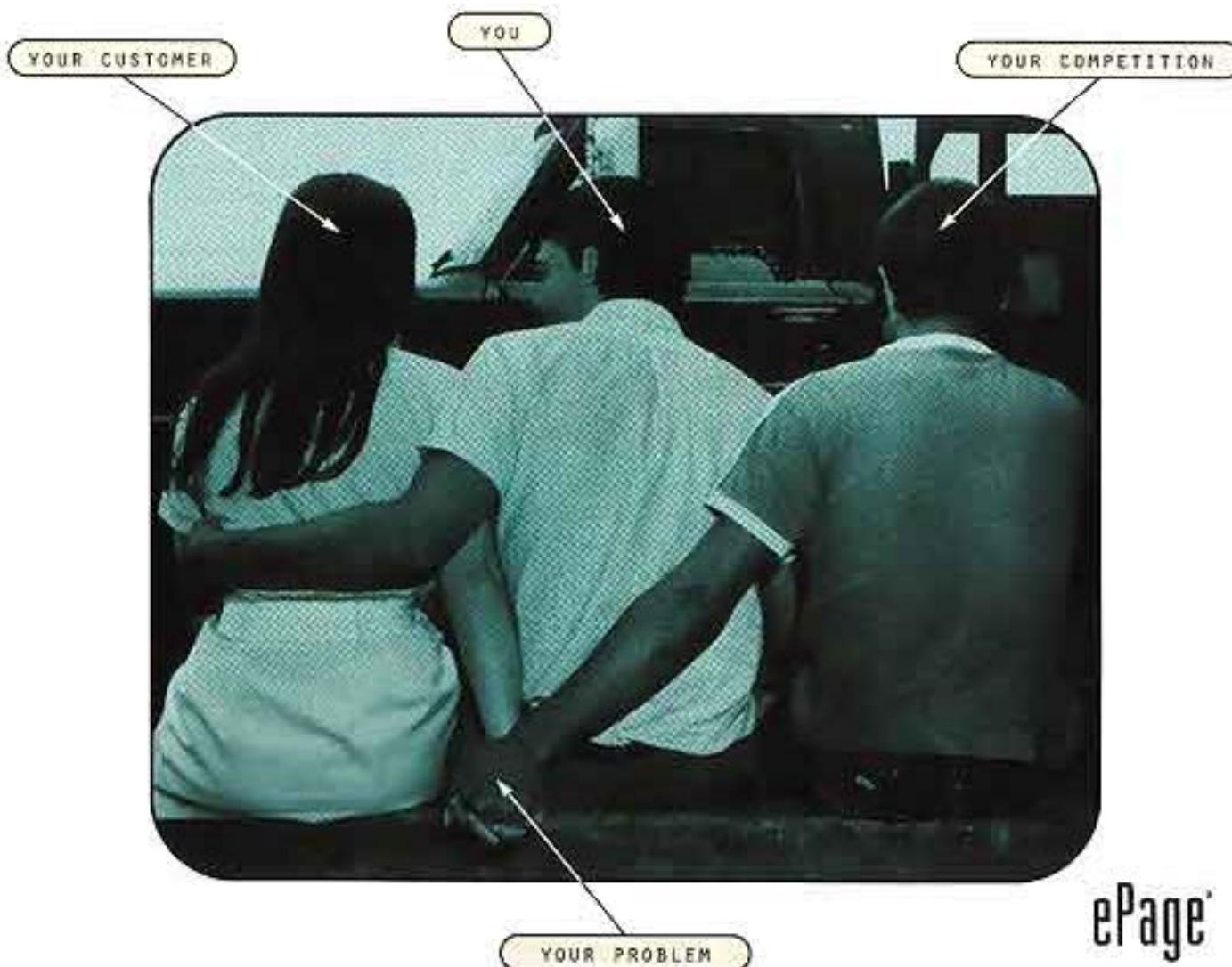
# Customer loyalty

I work for money,



If you want loyalty,  
get a dog.

# Can you see a problem?



ePage®

# Loyalty = wisdom

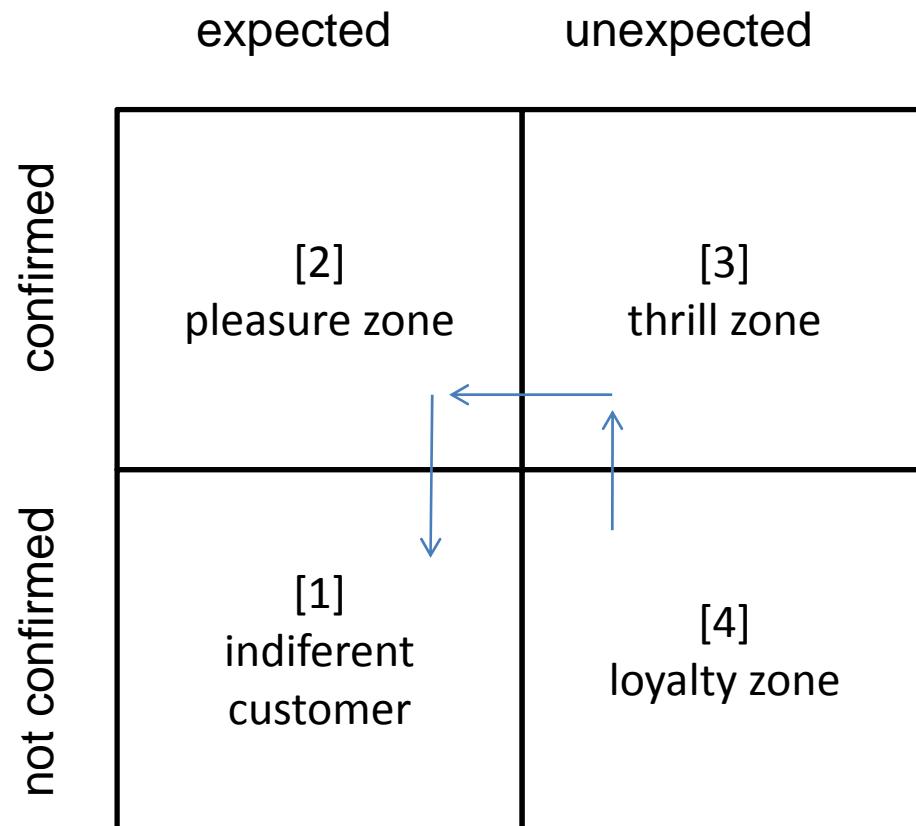
- loyalty after loyalty
  - awarness about personal data
- bull weight case study
  - individual errors were bigger than results average
- lost submarine case study
  - different discipline experts give very precise average location



source: James Suroviwecki "Wisdom of masses"

# Customer loyalty network

- how customer expectation affect shopping pleasure, thrill and loyalty



source: 2002-2006 Affinity Consulting, Brian Ward

# Loyalty <> profit

- "As a customer's relationship with the company lengthens, profits rise. And not just by a little. Companies can boost profits by almost 100 percent by retaining just 5 percent more of their customers" (F.P.Reichheld)

# History

- originally started in Germany in 1950s linked with governmental price restrictions in some industries
  - 1950 S&H Green Stamps give away shopping stamps in vegetables and fuel stores with possibility for trading stamps for goods
- first modern loyalty program was launched in 1981 by American Airlines
  - soon after it has been copied by many

# Loyalty program - advices

- be clear in defining value added by your program and communicate that value to customers
- use collected data for customized offers which can show you as a different competitor and can be highly accepted by customers
- be prepared to support project to the end (with careful adoptions to project only if necessary)

# Customer loyalty circle



# PremiumClub

- way to communicate to all customers in wide company
- way to reward loyal customers
- way to collect data about customers and their shopping behavior
- way to promote modern, technology oriented company values as service to customers

# PremiumClub

- in touch with technology even in most complicated (textile) retail
  - customer needs to see and feel clothes
- in touch with urban way of life
  - minimum boundaries
  - flexibility in signing in
  - flexibility in accumulation of points
  - flexibility in usage of points

# PremiumClub

- additional member benefits
  - on demand reward programs (seasonal)
- status symbol
  - unique club membership

# Lantea Group: PremiumClub :)

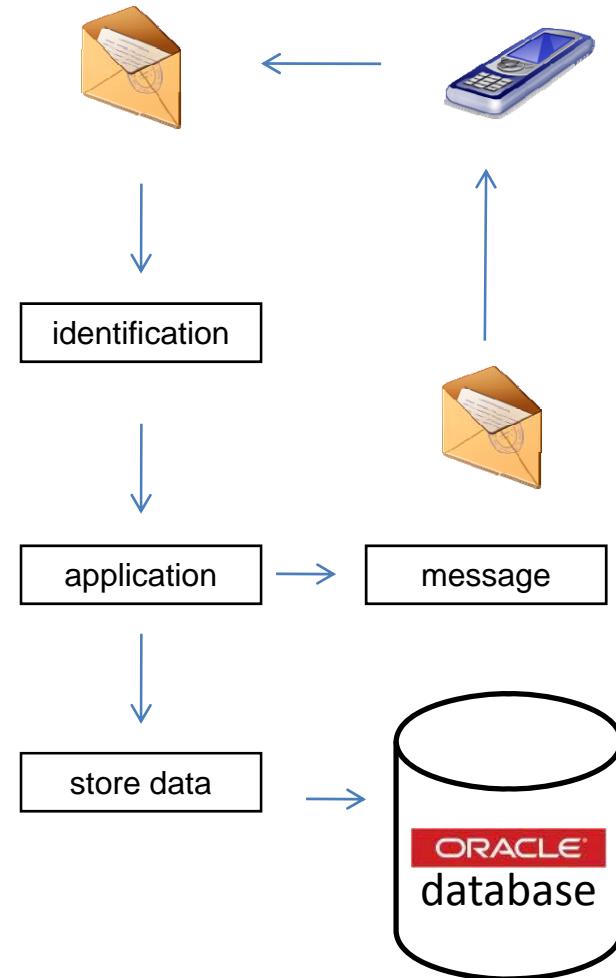
- “Lantea Group PremiumClub: club that fits you perfectly”



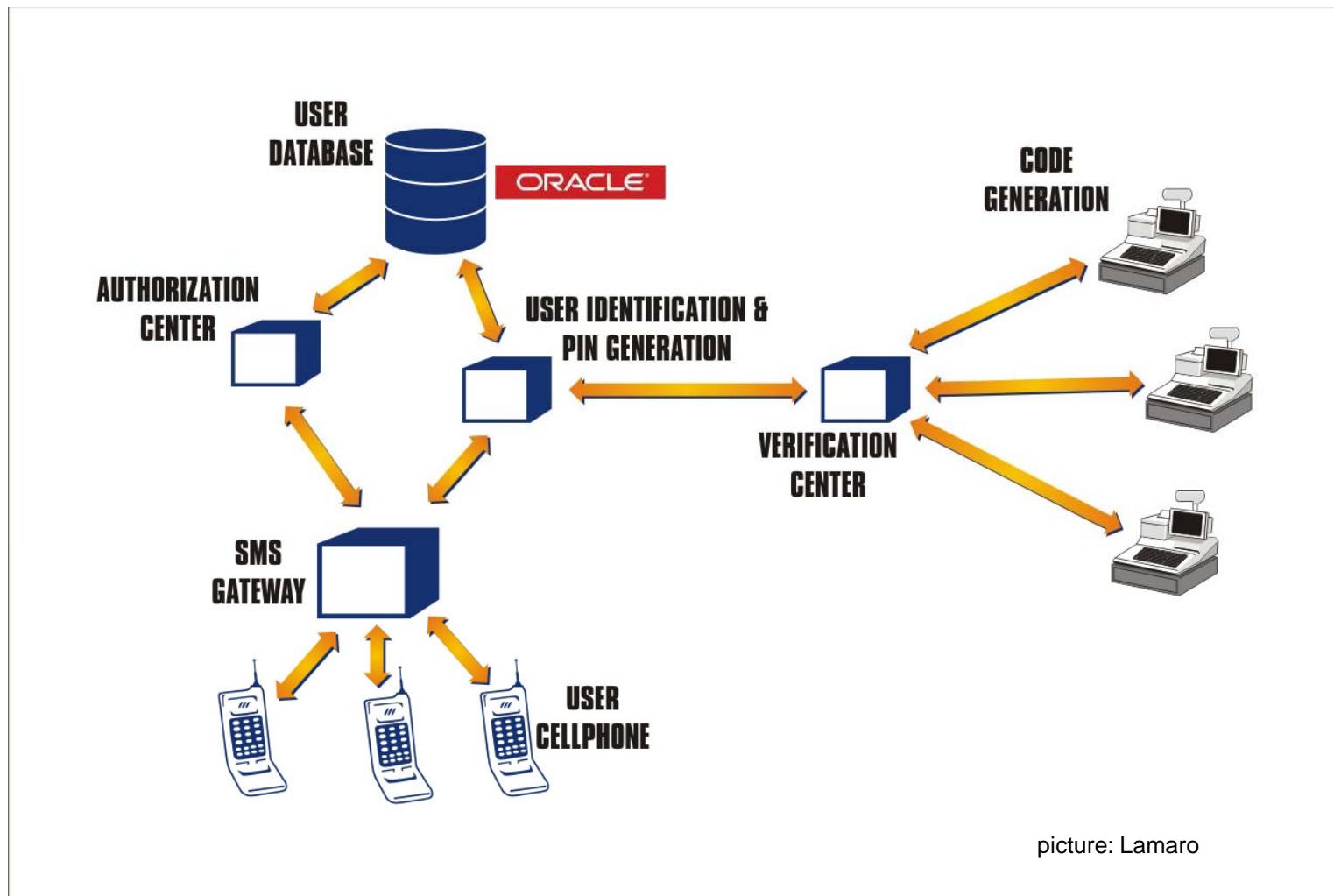
LANTEA GRUPA

PremiumClub :)

# System in brief



# System in brief



# Solution technical details

- GSM gateway
- mathematical model for coding and code supervision
- system for receiving, first level analysis and data storage
- system for second level analysis, confirmation and data storage
- system for third level data analysis and unique code
- error report system
- system for supervision and points usage
- analyst report warehouse with all kind of reports

# Solution - partners

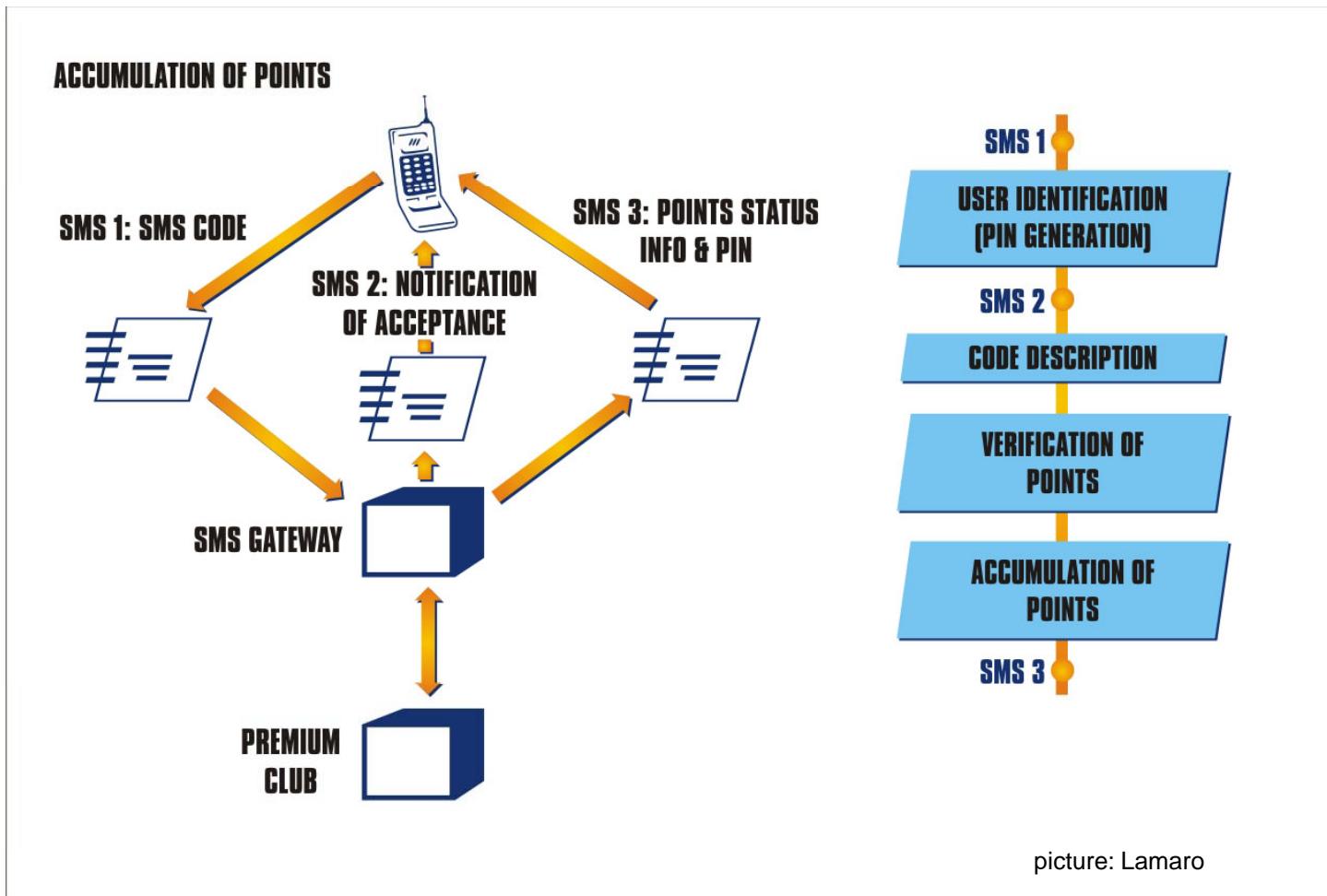


INFOMARE

# Proces

- Registration
- Accumulation of points
- Points usage
- System supervision

# Registration



# Accumulation of points

- Point of sale (POS) – code generation
- Sending code through SMS
- Analysis and storage center
- Confirmation and notification

# POS code generation

- Unique identifier of the POS receipt
- String length
- 36 character code, later modified
- 4 character sets, control character, total of 13 characters

# SMS sending

- Sending to GSM providers
- Forwarding to call center

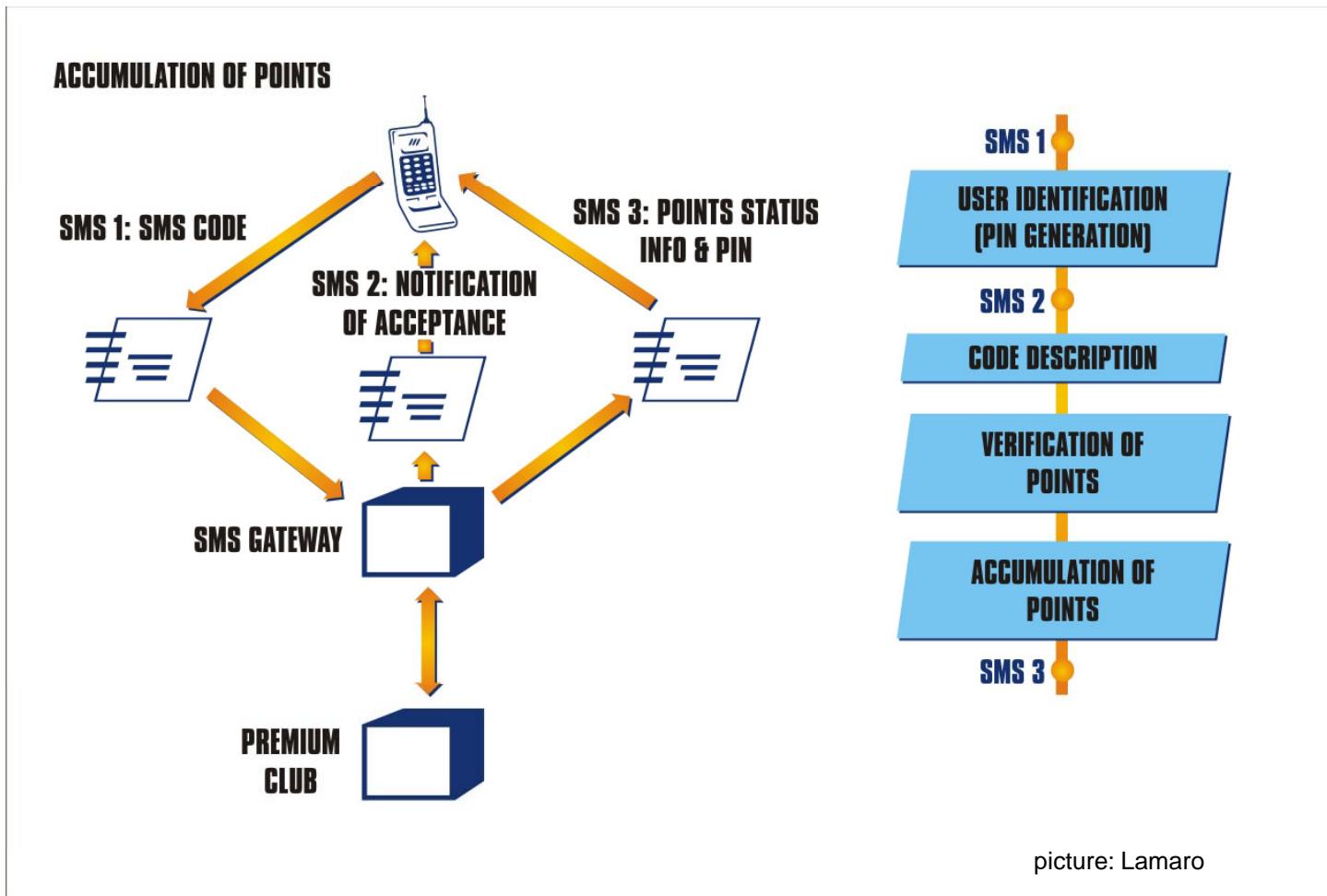
# Call center - registration and processing

- Formal validity
- Initial confirmation
- Forwarding to central system for final check
- Update of points

# Final control – central system

- Formal validity
- Content validity
- Final confirmation

# Accumulation of points



# Accumulation of points

- Club membership confirmation



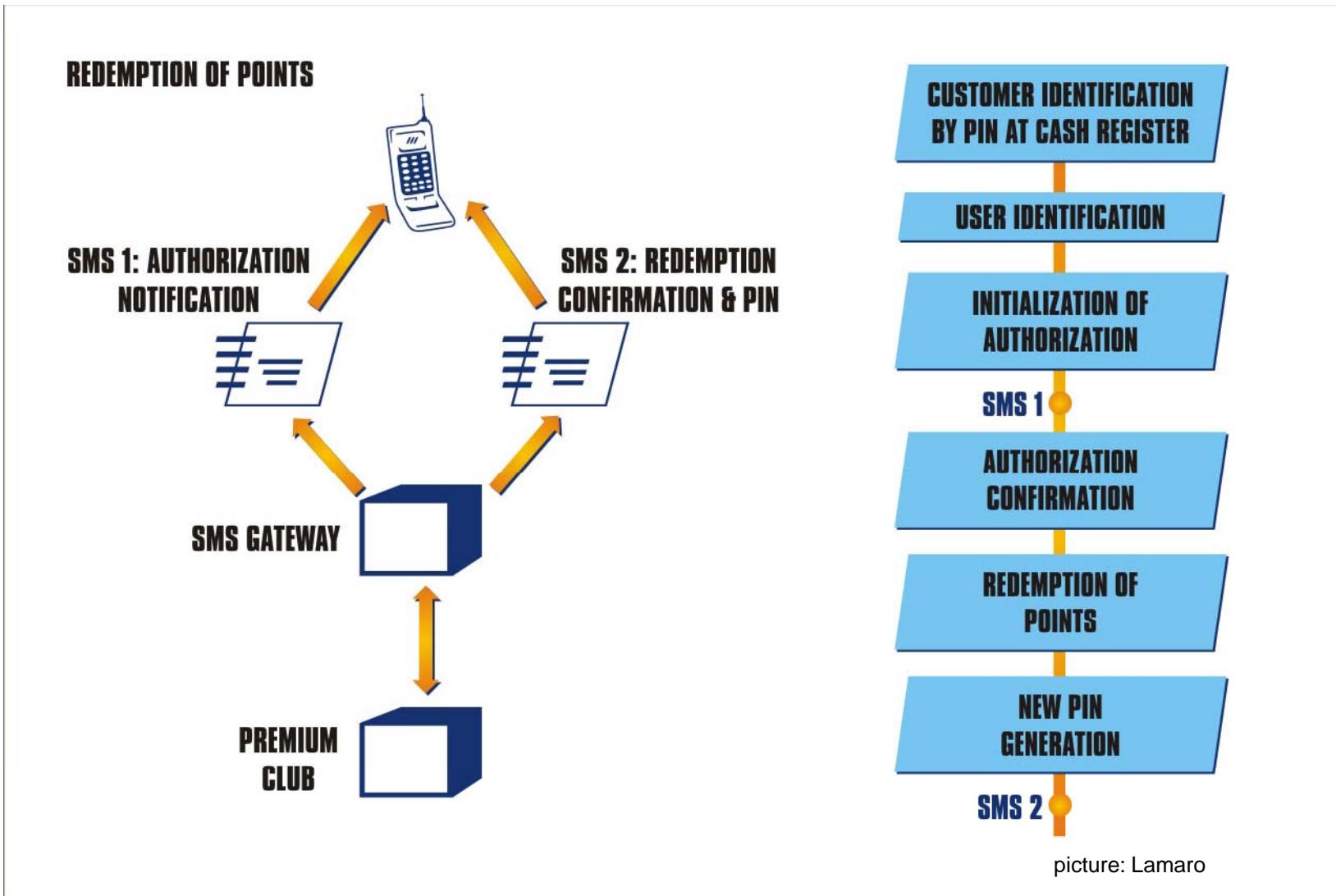
- Receipt, code and confirmation message



# Points usage (redemption)

- POS – cashier initiate process
- Call center – sending PIN code to confirmation center and waiting for activation code
- POS – cashier enters activation code in POS
- Server – transaction details storage

# Points usage



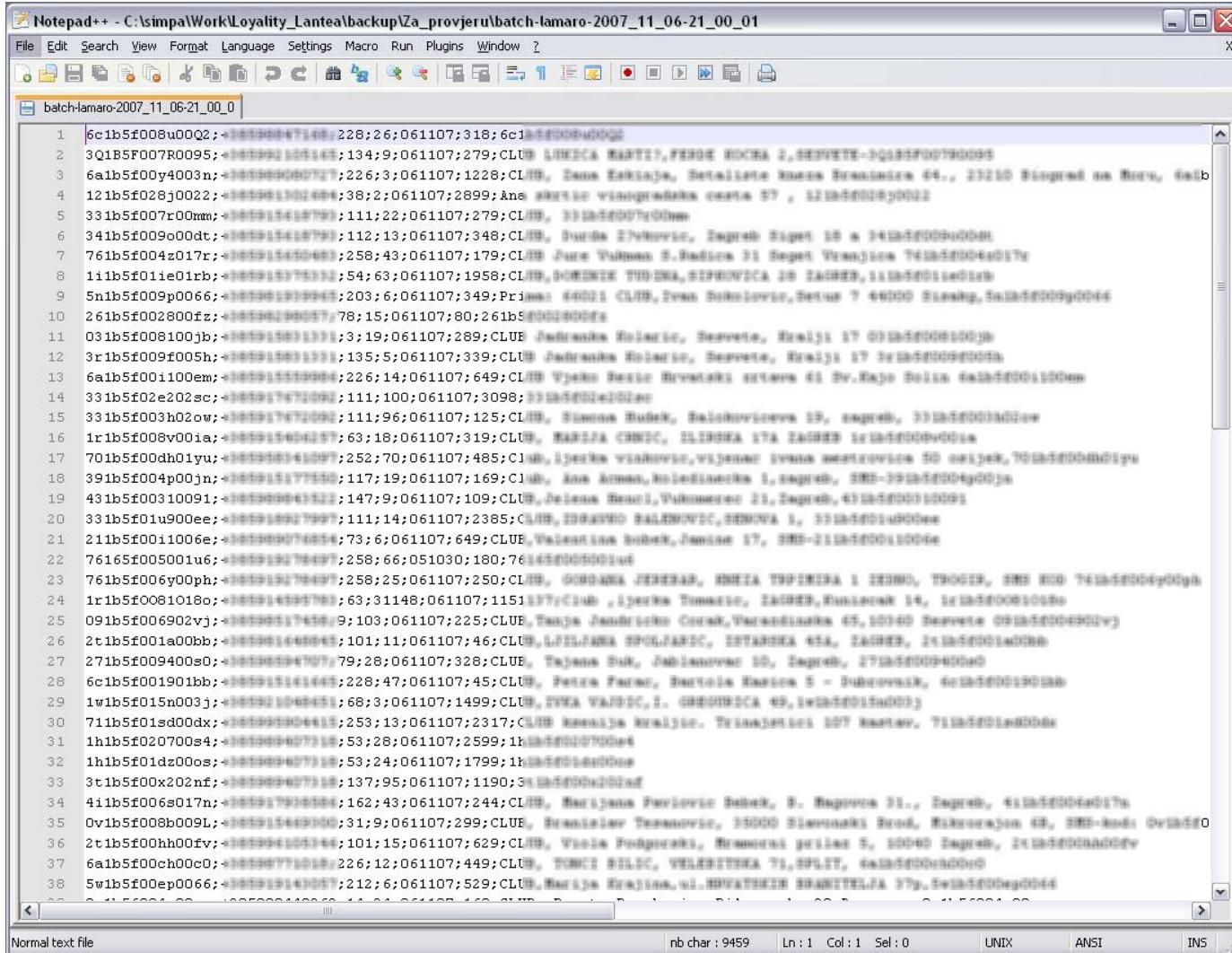
# System supervision

- Formal supervision – code structure, special signs (0,o,8,g,L,1)
- Content supervision
  - comparing data from SMS to actual data in system
  - fraud analysis (heavy or abnormal usage)
  - other

# System screenshots

- Python enviroment
- PL/SQL enviroment
- Oracle Discoverer / OBI EE Reporting

# ASCII data collection

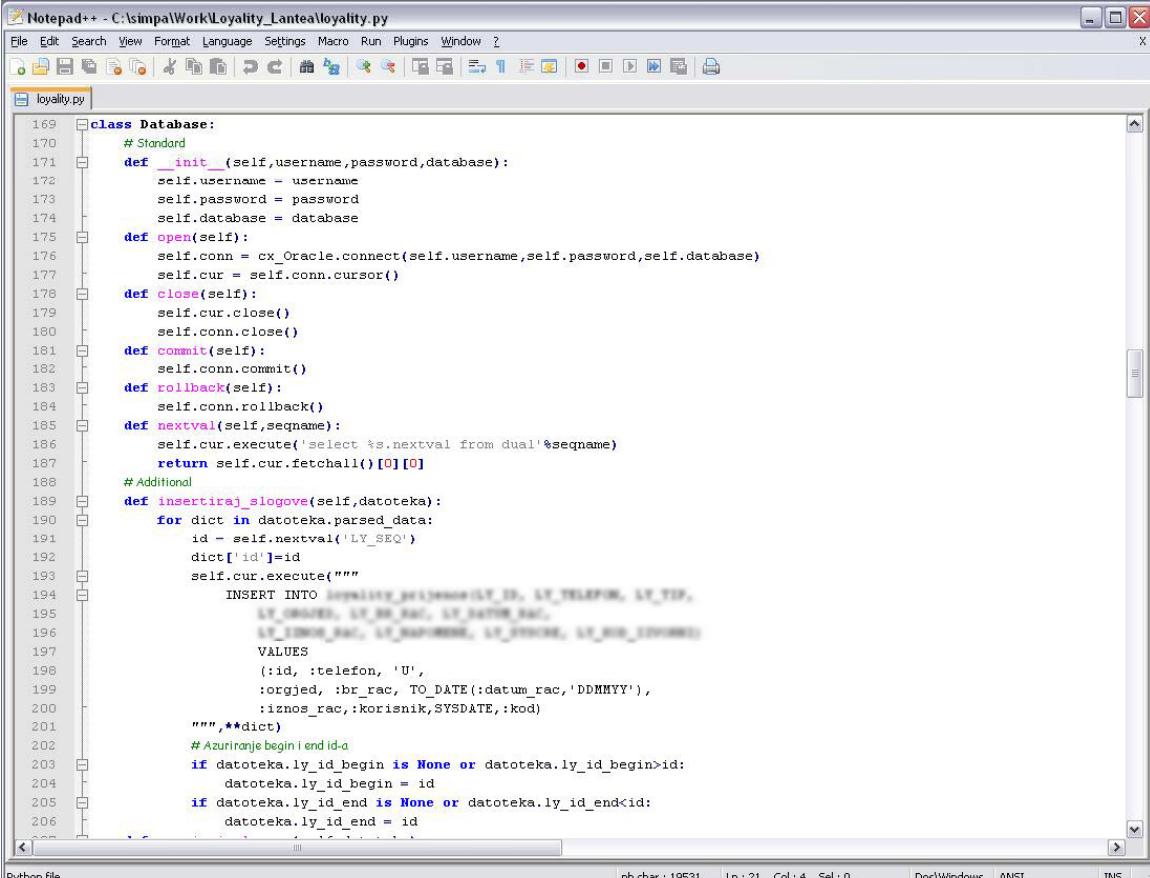


The screenshot shows a window titled "Notepad++ - C:\simpa\Work\Loyality\_Lantea\backup\Za\_proveru\batch-lamaro-2007\_11\_06-21\_00\_01". The menu bar includes File, Edit, Search, View, Format, Language, Settings, Macro, Run, Plugins, Window, and ?.

The main text area contains a large block of ASCII data, which appears to be a log or a list of entries. Each entry consists of a number (e.g., 1, 2, 3, etc.) followed by a series of numbers and text. The text describes various locations, names, and possibly dates. Some entries mention "CLUE" and "LAMARO". The data is organized into approximately 38 distinct entries.

```
1 6c1b5f008u00Q2;+00000007148;228;26;061107;318;6c1b5f008u00Q2
2 3Q1B5F007R0095;+00000005145;134;9;061107;279;CLUE LIJEDCA MARTET,FERDE RODCA 2,SEBETETE-3Q1B5F007R0095
3 6a1b5f00Y4003n;+00000000077;226;3;061107;1228;CLUE, Јанка ЕКСАЈА, СЕБАЛЕТЕ РОДЕР БЕЛКАСЕ 44., 21210 Бинград на Вару, Саб
4 121b5f028j0022;+00000000077;38;2;061107;2899;Ане ЂЕКИЋ ЧУДОВИДСА САЛА 57 , 22250 Београд
5 331b5f007r00Mm;+00000000077;112;22;061107;279;CLUE, Јанка ЂЕКИЋ, Ђагатија 18 и 34a/550904008
6 341b5f009600dt;+00000000077;112;13;061107;348;CLUE, Јанка ЂЕКИЋ, Ђагатија 18 и 34a/550904008
7 761b5f004z017r;+00000000077;258;43;061107;179;CLUE Јане Чубина 3,Радика 31 Ђагатија 76a/5509040078
8 111b5f011e01rb;+00000000077;54;63;061107;1958;CLUE, ЂОРДЖА ТИГРА, 53980УСКА 28 Ђагатија, 11a/55091140018
9 5n1b5f009p0066;+00000000077;203;6;061107;349;Priime: 46021 CLUE, Јана Ђокићевић, Ђене 7 6000 Београд, 6a/5509040066
10 261b5f002800fz;+00000000077;78;15;061107;80;261b5f002800fz
11 031b5f008100jb;+00000000077;3;19;061107;289;CLUE Јанка Ђокићевић, Ђене, Ђене 17 03/5509040078
12 3r1b5f009f005h;+00000000077;135;5;061107;339;CLUE Јанка Ђокићевић, Ђене, Ђене 17 03/5509040078
13 6a1b5f001100em;+00000000077;226;14;061107;649;CLUE Јанко Ђене Ђене Ђене 41 Ју.Бада Ђене 6a/5509110008
14 331b5f02e202sc;+00000000077;11;100;061107;3098;33/550904008
15 331b5f003h02ow;+00000000077;111;96;061107;125;CLUE, Јанка Ђене, Ђене Ђене 19, јагар, 33/550904008
16 1r1b5f008v00ia;+00000000077;63;18;061107;319;CLUE, Јанка Ђене, Ђене 17, јагар, 33/550904008
17 701b5f00d0h01yu;+00000000077;252;70;061107;485;CLUE, Јанка Ђене, Ђене 17, јагар, 70/5509040078
18 391b5f004p00jn;+00000000077;117;19;061107;169;CLUE, Јане Јовановић, Јовановић 1, јагар, 39/5509040078
19 431b5f00310091;+00000000077;147;9;061107;109;CLUE, Јане Јовановић, Јовановић 21, јагар, 43/5509040091
20 331b5f01u900ee;+00000000077;9;11;14;061107;2385;CLUE, Јане Јовановић, Јовановић 1, 33/5509040091
21 211b5f0011006e;+00000000077;73;6;061107;649;CLUE, Јане Јовановић, Јовановић 17, 21/5509040091
22 76165f005001u6;+00000000077;258;66;051030;180;76/5509040091
23 761b5f006y0ph;+00000000077;258;25;061107;250;CLUE, Јане Јовановић, Јовановић 22/5509040091
24 1r1b5f0081018o;+00000000077;63;31148;061107;1151/77;CLUE, Јане Јовановић, Јовановић 14, 1r1b5f0081018o
25 091b5f006902vj;+00000000077;9;103;061107;225;CLUE, Јане Јовановић, Јовановић 65, 09/40 Ђене 09/5509040078
26 2t1b5f001a0bb;+00000000077;101;11;061107;46;CLUE, Јане Јовановић, Јовановић 65, 21/550904008
27 271b5f009400s0;+00000000077;79;28;061107;328;CLUE, Јане Јовановић, Јовановић 10, јагар, 27/550904008
28 6c1b5f001901bb;+00000000077;228;47;061107;45;CLUE, Јане Јовановић, Јовановић 5 - Јане Јовановић, 6c1b5f001901bb
29 1w1b5f015n003j;+00000000077;68;3;061107;1499;CLUE, Јане Јовановић, Јовановић 49, 1w1b5f015n003j
30 711b5f01sd00dx;+00000000077;253;13;061107;2317;CLUE, Јане Јовановић, Јовановић 107 Јане Јовановић, 71/550904008
31 1h1b5f020700s4;+00000000077;53;28;061107;2599;1h1b5f020700s4
32 1h1b5f01dz00os;+00000000077;53;24;061107;1799;1h1b5f01dz00os
33 3t1b5f00x202nf;+00000000077;137;95;061107;1190;3t1b5f00x202nf
34 411b5f006017n;+00000000077;162;43;061107;244;CLUE, Јане Јовановић, Јовановић 31., јагар, 41/550904017a
35 0v1b5f008b009L;+00000000077;31;9;061107;299;CLUE, Јане Јовановић, 39/5509040091, Јане Јовановић 49, 0v1b5f008b009L
36 2t1b5f00hh00fv;+00000000077;101;15;061107;629;CLUE, Јане Јовановић, Јовановић 5, 100/40 Јагар, 21/550904008
37 6a1b5f00ch00c0;+00000000077;226;12;061107;449;CLUE, ТМЦС БИЛСА, ВЕЛЕДИЋА 71,БИЛСА, 6a/550904008
38 5w1b5f00ep0066;+00000000077;212;6;061107;529;CLUE, Јане Јовановић, 61/БИЛСА, ВЕЛЕДИЋА 37a, Јане Јовановић 66
```

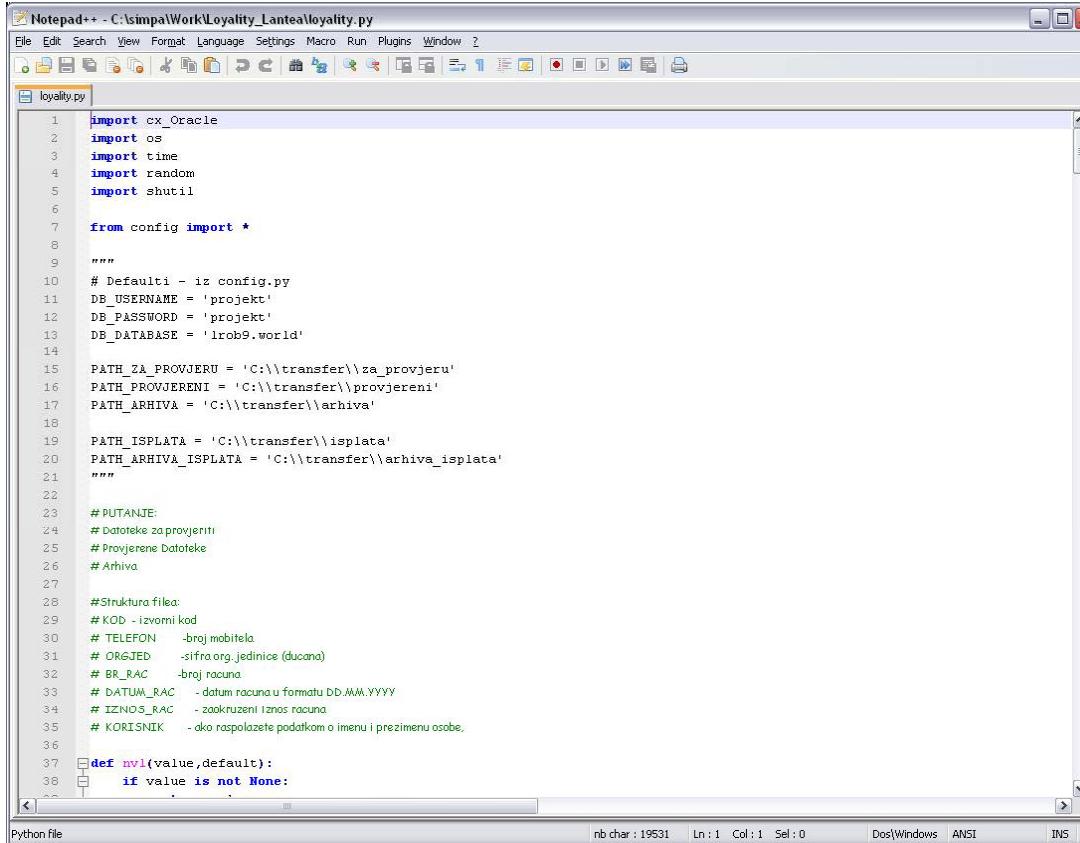
# Python source



The screenshot shows a Notepad++ window displaying Python code for a database module named `loyalty.py`. The code defines a `Database` class with methods for connecting to an Oracle database, committing transactions, rolling back, and getting the next value from a sequence. It also includes a method for inserting data into a specific table, handling sequences, and managing ID ranges.

```
169     class Database:
170         # Standard
171         def __init__(self,username,password,database):
172             self.username = username
173             self.password = password
174             self.database = database
175         def open(self):
176             self.conn = cx_Oracle.connect(self.username,self.password,self.database)
177             self.cur = self.conn.cursor()
178         def close(self):
179             self.cur.close()
180             self.conn.close()
181         def commit(self):
182             self.conn.commit()
183         def rollback(self):
184             self.conn.rollback()
185         def nextval(self,seqname):
186             self.cur.execute(' select %s.nextval from dual"%s"')
187             return self.cur.fetchone()[0][0]
188         # Additional
189         def insertiraj_slogove(self,datoteka):
190             for dict in datoteka.parsed_data:
191                 id = self.nextval('LY_SEQ')
192                 dict['id']=id
193                 self.cur.execute("""
194                     INSERT INTO loyalty_slogove(LY_ID, LY_TELEFON, LY_TIP,
195                     LY_ZNAMENI, LY_BR_RAC, LY_DATE_RAC,
196                     LY_ZNOS_RAC, LY_DATE_ZNOS, LY_STOKE, LY_BRUZNIK)
197                     VALUES
198                     (:id, :telefon, 'U',
199                     :orgjed, :br_rac, TO_DATE(:datum_rac,'DDMMYY'),
200                     :iznos_rac,:korisnik,SYSDATE,:kod)
201                     """ ,**dict)
202                 # Azuriranje begin i end id-a
203                 if datoteka.ly_id_begin is None or datoteka.ly_id_begin>id:
204                     datoteka.ly_id_begin = id
205                 if datoteka.ly_id_end is None or datoteka.ly_id_end<id:
206                     datoteka.ly_id_end = id
```

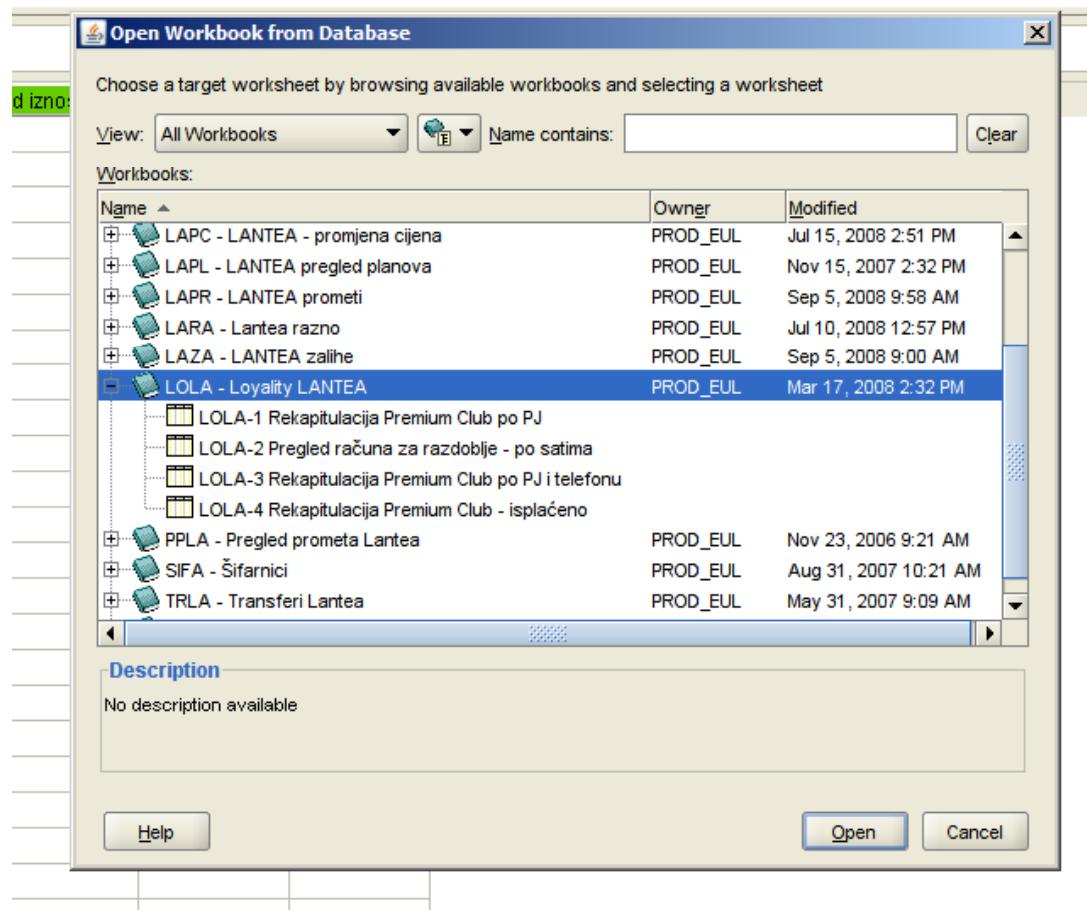
# Python source



The screenshot shows a Notepad++ window with the file 'loyalty.py' open. The code is a Python script with various imports, configuration variables, and a custom function 'nv1'. The code is color-coded for readability.

```
1 import cx_Oracle
2 import os
3 import time
4 import random
5 import shutil
6
7 from config import *
8
9 """
10 # Defaulti - iz config.py
11 DB_USERNAME = 'projekt'
12 DB_PASSWORD = 'projekt'
13 DB_DATABASE = 'irab9.world'
14
15 PATH_ZA_PROVJERU = 'C:\\\\transfer\\\\za_provjeru'
16 PATH_PROVJERENI = 'C:\\\\transfer\\\\provjereni'
17 PATH_ARHIVA = 'C:\\\\transfer\\\\arhiva'
18
19 PATH_ISPLATA = 'C:\\\\transfer\\\\isplata'
20 PATH_ARHIVA_ISPLATA = 'C:\\\\transfer\\\\arhiva_isplata'
21 """
22
23 # PUTANJE:
24 # Datoteke za provjeriti
25 # Provjerene datoteke
26 # Arhiva
27
28 # Struktura file-a:
29 # KOD - izvorni kod
30 # TELEFON - broj mobitela
31 # ORGJED - sifra org.jedinice (ducana)
32 # BR_RAC - broj racuna
33 # DATUM_RAC - datum racuna u formatu DD.MM.YYYY
34 # IZNOS_RAC - zaokruzeni iznos racuna
35 # KORISNIK - oko raspolažeće podatkom o imenu i prezimenu osobe,
36
37 def nv1(value,default):
38     if value is not None:
```

# Oracle Discoverer 10g



# Reports

http://ashr1.tekstipromet.hr:7779/discoverer/app/plus?event=getPlusPlugin&remoteSessionID=1

File Edit View Format Tools Help

Agency FB

LOLA-1

Page items:

|    | PJ  | Suma izdanih računa | Broj izdanih računa | Suma računa za koje su poslani kodovi | Broj računa za koje su poslani kodovi | Broj bodova | Udeo kodova u sumi računa | Udeo kodova u broju računa |
|----|-----|---------------------|---------------------|---------------------------------------|---------------------------------------|-------------|---------------------------|----------------------------|
| 1  | 001 | 559,751.00          | 1,831               | 127,818.00                            | 306                                   | 6,350       | 22.83%                    | 16.71%                     |
| 2  | 002 | 320,316.52          | 1,607               | 83,607.00                             | 243                                   | 4,174       | 26.10%                    | 15.12%                     |
| 3  | 003 | 780,148.53          | 977                 | 246,223.00                            | 242                                   | 12,284      | 31.56%                    | 24.77%                     |
| 4  | 006 | 373,565.32          | 979                 | 100,973.00                            | 206                                   | 5,030       | 27.03%                    | 21.04%                     |
| 5  | 007 | 371,222.50          | 1,855               | 65,860.00                             | 168                                   | 3,293       | 17.74%                    | 9.06%                      |
| 6  | 009 | 1,115,413.77        | 5,610               | 174,630.00                            | 594                                   | 8,701       | 15.66%                    | 10.59%                     |
| 7  | 010 | 143,242.96          | 816                 | 15,595.00                             | 49                                    | 778         | 10.45%                    | 6.00%                      |
| 8  | 011 | 146,881.50          | 618                 | 39,798.00                             | 109                                   | 1,981       | 27.10%                    | 17.64%                     |
| 9  | 012 | 152,907.10          | 456                 | 30,507.00                             | 57                                    | 1,521       | 19.95%                    | 12.50%                     |
| 10 | 013 | 247,268.28          | 2,743               | 21,289.00                             | 73                                    | 1,069       | 8.61%                     | 2.66%                      |

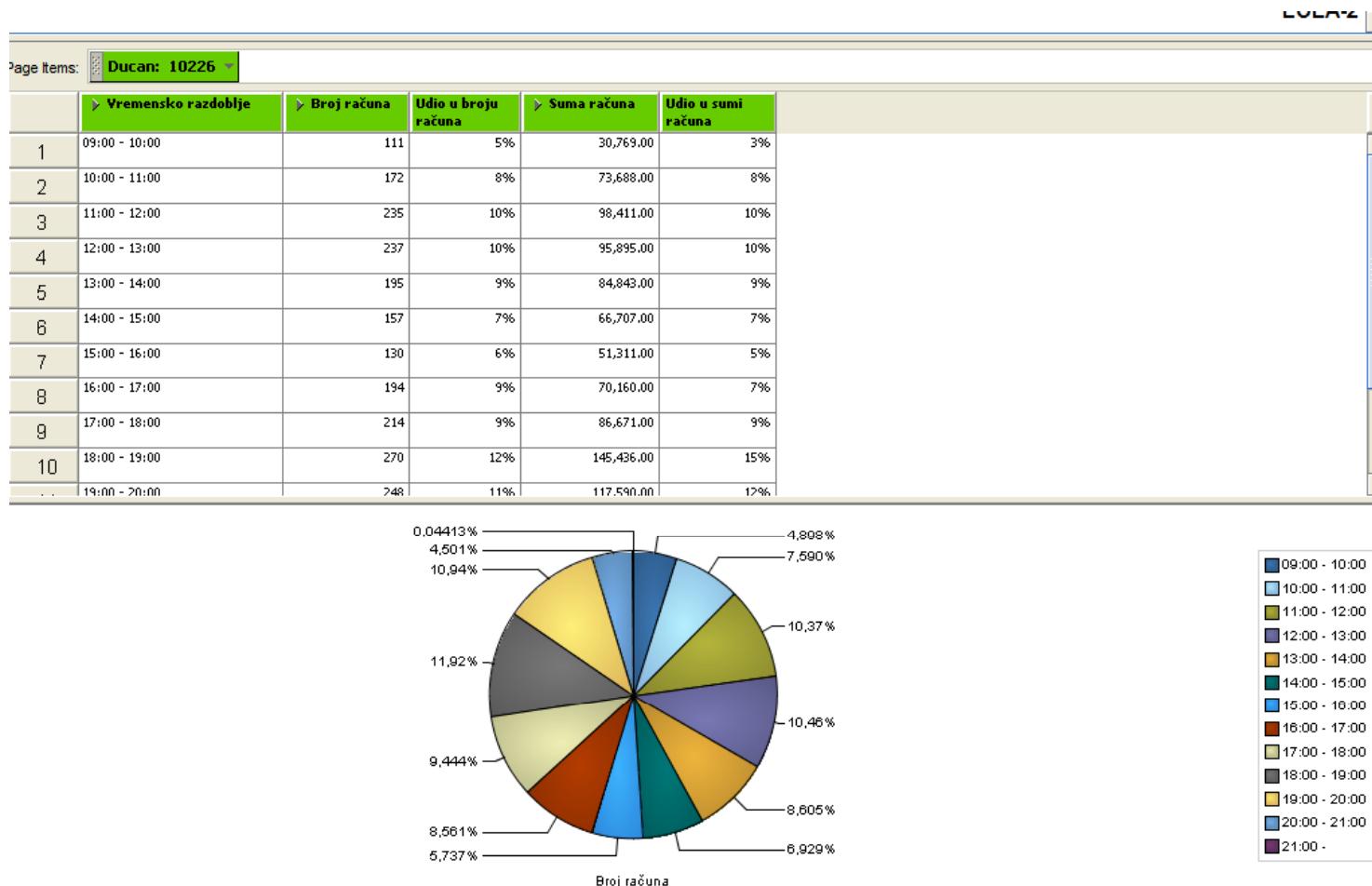
2.400K  
2.000K  
1.600K  
1.200K  
800K  
400K  
0K

Suma izdanih računa  
Broj izdanih računa  
Suma računa za koje su poslani kodovi  
Broj računa za koje su poslani kodovi  
Broj bodova  
Udeo kodova u sumi računa  
Udeo kodova u broju računa

Double-click here to edit the text area

LOLA-1 Rekapitulacija Premium Club po PJ | LOLA-2 Pregled računa za razdoblje - po satima | LOLA-3 Rekapitulacija Premium Club po PJ i telefonu | LOLA-4 Rekapitulacija Premium Club - isplaćeno

# Reports



# Experience, further reference

- code structure problem (14 digits)
- time segmentation (15 days from date of purchase)
- “points on points” situation
- fraud analysis
- technological reorganisation (problems with two or more data sites)
- personalisation

# Conclusion

- commercial value
- technology
  - aiming for simple architecture
  - partner support quality

# Thank you!

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- [tibor.cuturilo@tekstilpromet.hr](mailto:tibor.cuturilo@tekstilpromet.hr)
- [www.lanteagrupa.hr](http://www.lanteagrupa.hr)
- [www.tekstilpromet.hr](http://www.tekstilpromet.hr)

# Q&A

- Discussion

