



CA675 Cloud Technologies
Assignment 1: Individual Assignment
Spam Detection System

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LINK FOR GIT REPOSITORY

“<https://github.com/radhikavyas12/Assignment-1-Cloud>”

LINK FOR CLOUD Project

<https://console.cloud.google.com/compute/instances?authuser=1&project=sample-project-366621>

Difference between SPAM and HAM

A spam is basically undesirable bulk messages, it can be in the form of an emails, text messages or tweets etc which one might haven't asked for but still gets in contact with many a times. If we talk about emails common spam emails generally have an email address of some random word which are not legit for example @nits.cem , @heckererth.com etc.

A Ham on the other side are messages which one gets which are generally desired and one might have opted for it in one or the other way. For example, while logging into any ecommerce website there might be some suggestions of receiving latest updates of clothing or related stuff via mails to keep you updated because of which we receive emails on daily basis which we don't even realise that we opted for.

SPAM DETECTION SYSTEM

Task 1:

To perform the task Google cloud Platform was used for creation of a vm instance and single node cluster



Create an instance

To create a VM instance, select one of the options:

- New VM instance**
Create a single VM instance from scratch
- New VM instance from template**
Create a single VM instance from an existing template
- New VM instance from machine image**
Create a single VM instance from an existing machine image
- Marketplace**
Deploy a ready-to-go solution onto a VM instance

Name *
assignment1

Labels ?

+ ADD LABELS

Region *
us-central1 (Iowa) ?
Region is permanent

Zone *
us-central1-a ?
Zone is permanent

Machine configuration

Machine family

GENERAL-PURPOSE COMPUTE-OPTIMISED MEMORY-OPTIMISED GPU

Machine types for common workloads, optimised for cost and flexibility

Series
N1
Powered by Intel Skylake CPU platform or one of its predecessors

Machine type
n1-standard-1 (1 vCPU, 3.75 GB memory)



vCPU

1

Memory

3.75 GB

✓ CPU PLATFORM AND GPU

Display device

Enable to use screen capturing and recording tools.

Java Installation



```
nRelease
Get:7 http://packages.cloud.google.com/apt google-compute-engine-bullseye-stable InRele
[5533 B]
Get:8 http://security.debian.org/debian-security bullseye-security/main Sources [167 kB]
Get:9 http://security.debian.org/debian-security bullseye-security/main amd64 Packages
kB]
Get:10 http://security.debian.org/debian-security bullseye-security/main Translation-en
3 kB]
Get:11 http://deb.debian.org/debian bullseye-backports/main Sources.diff/Index [63.3 kB]
Get:12 http://deb.debian.org/debian bullseye-backports/main amd64 Packages.diff/Index [
kB]
Get:13 http://deb.debian.org/debian bullseye-backports/main Translation-en.diff/Index [
kB]
Get:14 http://packages.cloud.google.com/apt cloud-sdk-bullseye/main amd64 Packages [203
Get:15 http://deb.debian.org/debian bullseye-backports/main Sources T-2022-11-06-0803.3
2022-11-01-2004.36.pdiff [29.6 kB]
Get:15 http://deb.debian.org/debian bullseye-backports/main Sources T-2022-11-06-0803.3
2022-11-01-2004.36.pdiff [29.6 kB]
Get:16 http://deb.debian.org/debian bullseye-backports/main amd64 Packages T-2022-11-06
3.39-F-2022-11-02-0204.20.pdiff [14.2 kB]
Get:17 http://deb.debian.org/debian bullseye-backports/main Translation-en T-2022-11-06
3.39-F-2022-11-05-0803.39.pdiff [8032 B]
Get:16 http://deb.debian.org/debian bullseye-backports/main amd64 Packages T-2022-11-06
3.39-F-2022-11-02-0204.20.pdiff [14.2 kB]
Get:17 http://deb.debian.org/debian bullseye-backports/main Translation-en T-2022-11-06
3.39-F-2022-11-05-0803.39.pdiff [8032 B]
Fetched 1083 kB in 1s (982 kB/s)
Reading package lists... Done
radhika_vyas2@assignment1:~$ sudo apt-get install default - jdk
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package default
E: Unable to locate package jdk
radhika_vyas2@assignment1:~$ java -version
openjdk_version "11.0.16" 2022-07-19
OpenJDK Runtime Environment (build 11.0.16+8-post-Debian-1deb11u1)
OpenJDK 64-Bit Server VM (build 11.0.16+8-post-Debian-1deb11u1, mixed mode, sharing)
radhika_vyas2@assignment1:~$
```

Creation of HDuser for Hadoop

```
radhika_vyas2@assignment1:~$ sudo apt-get install ssh
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
ssh is already the newest version (1:8.4p1-5+deb11u1).
0 upgraded, 0 newly installed, 0 to remove and 18 not upgraded.
radhika_vyas2@assignment1:~$ which ssh
/usr/bin/ssh
radhika_vyas2@assignment1:~$ which sshd
radhika_vyas2@assignment1:~$ su hduser
Password:
su: Authentication failure
radhika_vyas2@assignment1:~$ letmein1
-bash: letmein1: command not found
radhika_vyas2@assignment1:~$ su hduser
Password:
su: Authentication failure
radhika_vyas2@assignment1:~$ su hduser
Password:
hduser@assignment1:/home/radhika_vyas2$ ssh-keygen
ssh: Could not resolve hostname -: Name or service not known
hduser@assignment1:/home/radhika_vyas2$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/hduser/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/hduser/.ssh/id_rsa
Your public key has been saved in /home/hduser/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:TOI85TtzAw1FuJSuQMr+OkQrif/FGZfEsKJqQyHo/aw hduser@assignment1
The key's randomart image is:
+---[RSA 3072]---+
| . . o
| . . + o
|o. o o X
|o.+ + X *
|.+=o. = S .
|oo oo * o
|. *. o = + o
|. +... + .
|. .Eo
+---[SHA256]-----+
hduser@assignment1:/home/radhika_vyas2$
```



SSH-in-browser

⬆️ UPLOAD FILE ⬇️ DOWNLOAD FILE ! 🗂 ⚙️

```
radhika_vyas2@assignment1:~$ pwd
/home/radhika_vyas2
radhika_vyas2@assignment1:~$ wget http://apache.cs.utah.edu/hadoop/common/hadoop-2.10.2/hadoop-2.10.2.tar.gz
-bash: wget: command not found
radhika_vyas2@assignment1:~$ get http://apache.cs.utah.edu/hadoop/common/hadoop-2.10.2/hadoop-2.10.2.tar.gz
-bash: get: command not found
radhika_vyas2@assignment1:~$ wget -v
-bash: wget: command not found
radhika_vyas2@assignment1:~$ install wget
install: missing destination file operand after 'wget'
Try 'install --help' for more information.
radhika_vyas2@assignment1:~$ install -wget
install: invalid option -- 'w'
Try 'install --help' for more information.
radhika_vyas2@assignment1:~$ sudo apt-get install wget
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  wget
0 upgraded, 1 newly installed, 0 to remove and 18 not upgraded.
Need to get 964 kB of archives.
After this operation, 3559 kB of additional disk space will be used.
Get:1 http://deb.debian.org/debian bullseye/main amd64 wget amd64 1.21-1+deb11u1 [964 kB]
Fetched 964 kB in 0s (25.5 MB/s)
Selecting previously unselected package wget.
(Reading database ... 56570 files and directories currently installed.)
Preparing to unpack .../wget_1.21-1+deb11u1_amd64.deb ...
Unpacking wget (1.21-1+deb11u1) ...
Setting up wget (1.21-1+deb11u1) ...
Processing triggers for man-db (2.9.4-2) ...
radhika_vyas2@assignment1:~$ wget http://apache.cs.utah.edu/hadoop/common/hadoop-2.10.2/hadoop-2.10.2.tar.gz
--2022-11-06 14:49:48-- http://apache.cs.utah.edu/hadoop/common/hadoop-2.10.2/hadoop-2.10.2.tar.gz
Resolving apache.cs.utah.edu (apache.cs.utah.edu)... 155.98.64.87
Connecting to apache.cs.utah.edu (apache.cs.utah.edu)|155.98.64.87|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 414624228 (395M) [application/x-gzip]
Saving to: 'hadoop-2.10.2.tar.gz'

hadoop-2.10.2.tar.gz      89%[=====>] 355.62M  2.21MB/s  eta 19s

openjdk version "11.0.16" 2022-07-19
OpenJDK Runtime Environment (build 11.0.16+8-post-Debian-1deb11u1)
```



SSH-in-browser

UPLOAD FILE

DOWNLOAD FILE



```

test -r ~/.dircolors && eval "$(dircolors -b ~/.dircolors)" || eval "$(dircol
alias ls='ls --color=auto'
#alias dir='dir --color=auto'
#alias vdir='vdir --color=auto'

#alias grep='grep --color=auto'
#alias fgrep='fgrep --color=auto'
#alias egrep='egrep --color=auto'
fi

# colored GCC warnings and errors
#export GCC_COLORS='error=01;31:warning=01;35:note=01;36:caret=01;32:locus=01:qu

# some more ls aliases
#alias ll='ls -l'
#alias la='ls -A'
#alias l='ls -CF'

# Alias definitions.
# You may want to put all your additions into a separate file like
# ~/.bash_aliases, instead of adding them here directly.
# See /usr/share/doc/bash-doc/examples in the bash-doc package.

if [ -f ~/.bash_aliases ]; then
. ~/.bash_aliases
fi

# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile
# sources /etc/bash.bashrc).
if ! shopt -oq posix; then
if [ -f /usr/share/bash-completion/bash_completion ]; then
. /usr/share/bash-completion/bash_completion
elif [ -f /etc/bash_completion ]; then
. /etc/bash_completion
fi
fi
export JAVA_HOME=/usr/lib/jvm/java-8-openjdk-amd64
export HADOOP_INSTALL=/home/radhika_vyas2/hadoop
export PATH=$PATH:$HADOOP_INSTALL/bin
export PATH=$PATH:$HADOOP_INSTALL/sbin
export HADOOP_MAPRED_HOME=$HADOOP_INSTALL
export HADOOP_COMMON_HOME=$HADOOP_INSTALL
export HADOOP_HDFS_HOME=$HADOOP_INSTALL
export YARN_HOME=$HADOOP_INSTALL
export HADOOP_COMMON_LIB_NATIVE_DIR=$HADOOP_INSTALL/lib/native
export HADOOP_OPTS="-Djava.library.path=$HADOOP_INSTALL/lib"
export HADOOP_HOME_WARN_SUPPRESS=1
export HADOOP_ROOT_LOGGER="WARN,DRFA"
".bashrc" 125L, 4057B
125, 37

```

Hive installation

```

Hive 3.1.2
Git git://HW13934/Users/gates/tmp/hive-branch-3.1/hive -r 8190d2be7b7165effa62bd21b7d60ef81fb0e4af
Compiled by gates on Thu Aug 22 15:01:18 PDT 2019
From source with checksum 0492c08f784b188c349f6afb1d8d9847

```

PIG INSTALLATION

```

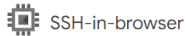
Apache Pig version 0.17.0 (r1797386)
compiled Jun 02 2017, 15:41:58

```

The dataset used is a dataset of spam and ham in SMS which was extracted from Kaggle <https://github.com/radhikavyas12/Assignment-1-Cloud/blob/main/spamdataset.csv>

Firstly the file was uploaded in the cloud system cluster.

New directory was created in HDFS



```
Linux hadoopcluster-w-0 5.10.0-0.deb10.16-amd64 #1 SMP Debian 5.10.127-2-bpo10+1 (2022-07-28) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Mon Oct 31 23:21:28 2022 from 35.235.241.18
radhika_vyas2@hadoopcluster-w-0:~$ hdfs dfs -put -f /home/radhika_vyas2/dataset.xls /home/dataproc/sd/dataset/
-put: java.net.UnknownHostException: hadoopcluster-m
Usage: hadoop fs [generic options]
    [-appendToFile <localsrc> ... <dst>]
    [-cat [-ignoreCrc] <src> ...]
    [-checksum <src> ...]
    [-chgrp [-R] GROUP PATH...]
    [-chmod [-R] <MODE[,MODE]... | OCTALMODE> PATH...]
    [-chown [-R] [OWNER][:[:GROUP]] PATH...]
    [-copyFromLocal [-f] [-p] [-l] [-d] [-t <thread count>] [-q <thread pool queue size>] <localsrc> ... <dst>]
    [-copyToLocal [-f] [-p] [-crc] [-ignoreCrc] [-t <thread count>] [-q <thread pool queue size>] <src> ... <localdst>]
    [-count [-q] [-h] [-v] [-t <storage type>]] [-u] [-x] [-e] <path> ...]
    [-cp [-f] [-p | -p[topax]] [-d] [-t <thread count>] [-q <thread pool queue size>] <src> ... <dst>]
    [-createSnapshot <snapshotDir> [<snapshotName>]]
    [-deleteSnapshot <snapshotDir> <snapshotName>]
    [-df [-h] [<path> ...]]
    [-du [-s] [-h] [-v] [-x] <path> ...]
    [-expunge [-immediate]]
    [-find <path> ... <expression> ...]
    [-get [-f] [-p] [-crc] [-ignoreCrc] [-t <thread count>] [-q <thread pool queue size>] <src> ... <localdst>]
    [-getfacl [-R] <path>]
    [-getfattr [-R] {-n name | -d} [-e en] <path>]
    [-getmerge [-nl] [-skip-empty-file] <src> <localdst>]
    [-head <file>]
    [-help [cmd ...]]
    [-ls [-C] [-d] [-h] [-q] [-R] [-t] [-S] [-r] [-u] [-e] [<path> ...]]
    [-mkdir [-p] <path> ...]
    [-moveFromLocal [-f] [-p] [-l] [-d] <localsrc> ... <dst>]
    [-moveToLocal <src> <localdst>]
    [-mv <src> ... <dst>]
    [-put [-f] [-p] [-l] [-d] [-t <thread count>] [-q <thread pool queue size>] <localsrc> ... <dst>]
    [-renameSnapshot <snapshotDir> <oldName> <newName>]
    [-rm [-f] [-r|-R] [-skipTrash] [-safely] <src> ...]
    [-rmdir [--ignore-fail-on-non-empty] <dir> ...]
    [-setfacl [-R] [{-b|-k} {-ml|-x <acl_spec>} <path>]|[--set <acl_spec> <path>]]
    [-setfattr {-n name [-v value] | -x name} <path>]
    [-setrep [-R] [-w] <rep> <path> ...]
    [-stat [format] <path> ...]
    [-tail [-f] [-s <sleep interval>] <file>]
    [-test [-[defswrz]] <path>]
```

for creating external table in HIVE

create external table if not exists sms_scam(Category string,SMS string)

> comment 'SMS SPAM DETECTION'

> row format delimited

> fields terminated by','

> stored as textfile

> location '/rv/dataset/';



```
put: `/home/radhika_vyas2/dataset.xlsx': No such file or directory
radhika_vyas2@hadoopcluster-m:~$ pwd
/home/radhika_vyas2
radhika_vyas2@hadoopcluster-m:~$ ls
Dataset.xlsx  dataset  sataset
radhika_vyas2@hadoopcluster-m:~$ hdfs dfs -put -f /home/radhika_vyas2/Da
et
radhika_vyas2@hadoopcluster-m:~$ hive
Hive Session ID = 9e0b2f2e-9f53-4d31-93d2-b547960077d2

Logging initialized using configuration in file:/etc/hive/conf.dist/hive
Async: true
Hive Session ID = 111f9c91-1e8b-4bec-9c1e-d3c2e963995d
hive> create external table if not exists sms_scam(Category string,SMS s
    > comment 'SMS SPAM DETECTION'
    > row format delimited
    > fields terminated by','
    > stored as textfile
    > location '/rv/dataset/';
OK
Time taken: 1.602 seconds
hive> □
```




SSH-in-browser

```
> stored as textfile
> location '/rv/dataset/';

OK
Time taken: 0.249 seconds
hive> select * from sms_scam
      > select * from sms_scam;
FAILED: ParseException line 2:0 missing EOF at 'select' near 'sms_scam'
hive> select*from sms_scam;
Query ID = radhika_vyas2_20221107223425_488022f0-9a2d-4882-a3cd-79f2e86f5203
Total jobs = 1
Launching Job 1 out of 1
Status: Running (Executing on YARN cluster with App id application_1667854260581_0004)
```

| VERTICES | MODE | STATUS | TOTAL | COMPLETED | RUNNING | PENDING | FAILED | KILLED |
|----------|------|--------|-------|-----------|---------|---------|--------|--------|
|----------|------|--------|-------|-----------|---------|---------|--------|--------|

| VERTICES | MODE | STATUS | TOTAL | COMPLETED | RUNNING | PENDING | FAILED | KILLED |
|----------|------|--------|-------|-----------|---------|---------|--------|--------|
|----------|------|--------|-------|-----------|---------|---------|--------|--------|

| VERTICES | MODE | STATUS | TOTAL | COMPLETED | RUNNING | PENDING | FAILED | KILLED |
|----------|------|--------|-------|-----------|---------|---------|--------|--------|
|----------|------|--------|-------|-----------|---------|---------|--------|--------|

| VERTICES | MODE | STATUS | TOTAL | COMPLETED | RUNNING | PENDING | FAILED | KILLED |
|----------|------|--------|-------|-----------|---------|---------|--------|--------|
|----------|------|--------|-------|-----------|---------|---------|--------|--------|

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|----------|------|--------|-------|-----------|---------|---------|--------|--------|
|----------|------|--------|-------|-----------|---------|---------|--------|--------|

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|----------|------|--------|-------|-----------|---------|---------|--------|--------|
|----------|------|--------|-------|-----------|---------|---------|--------|--------|

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|----------|------|--------|-------|-----------|---------|---------|--------|--------|
|----------|------|--------|-------|-----------|---------|---------|--------|--------|

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|----------|------|--------|-------|-----------|---------|---------|--------|--------|
|----------|------|--------|-------|-----------|---------|---------|--------|--------|

| VERTICES | MODE | STATUS | TOTAL | COMPLETED | RUNNING | PENDING | FAILED | KILLED |
|----------|------|--------|-------|-----------|---------|---------|--------|--------|
|----------|------|--------|-------|-----------|---------|---------|--------|--------|

| VERTICES | MODE | STATUS | TOTAL | COMPLETED | RUNNING | PENDING | FAILED | KILLED |
|----------|------|--------|-------|-----------|---------|---------|--------|--------|
|----------|------|--------|-------|-----------|---------|---------|--------|--------|

| VERTICES | MODE | STATUS | TOTAL | COMPLETED | RUNNING | PENDING | FAILED | KILLED |
|----------|------|--------|-------|-----------|---------|---------|--------|--------|
|----------|------|--------|-------|-----------|---------|---------|--------|--------|

| VERTICES | MODE | STATUS | TOTAL | COMPLETED | RUNNING | PENDING | FAILED | KILLED |
|----------|------|--------|-------|-----------|---------|---------|--------|--------|
|----------|------|--------|-------|-----------|---------|---------|--------|--------|



```
-----
VERTICES    MODE    STATUS  TOTAL  COMPLETED  RUNNING  PENDING  FAILED  KILLED
-----
VERTICES    MODE    STATUS  TOTAL  COMPLETED  RUNNING  PENDING  FAILED  KILLED
-----
VERTICES    MODE    STATUS  TOTAL  COMPLETED  RUNNING  PENDING  FAILED  KILLED
-----
VERTICES    MODE    STATUS  TOTAL  COMPLETED  RUNNING  PENDING  FAILED  KILLED
-----
Map 1 ..... container    SUCCEEDED    1    1    0    0    0    0

VERTICES: 01/01 [=====] 100% ELAPSED TIME: 6.63 s
-----
OK
Category      SMS
ham           "Go until jurong point
ham           Ok lar... Joking wif u oni...
spam          Free entry in 2 a wkly comp to win FA Cup final tkts 21st May 2005. Text FA to 87121 to receive entry question(std txt rate)T&C's apply 08452810075over18's
ham           U dun say so early hor... U c already then say...
ham           "Nah I don't think he goes to usf
spam          "FreeMsg Hey there darling it's been 3 week's now and no word back! I'd like some fun you up for it still? Tb ok! XxX std chgs to send
ham           Even my brother is not like to speak with me. They treat me like aids patent.
ham           As per your request 'Melle Melle (Oru Minnaminunginte Nurungu Vettam)' has been set as your callertune for all Callers. Press *9 to copy your friends Calle
spam          WINNER!! As a valued network customer you have been selected to receivea 1000 prize reward! To claim call 09061701461. Claim code KL341. Valid 12 hours onl
spam          Had your mobile 11 months or more? U R entitled to Update to the latest colour mobiles with camera for Free! Call The Mobile Update Co FREE on 08002986030
ham           "I'm gonna be home soon and i don't want to talk about this stuff anymore tonight
spam          "SIX chances to win CASH! From 100 to 20
spam          "URGENT! You have won a 1 week FREE membership in our 100
ham           I've been searching for the right words to thank you for this breather. I promise i wont take your help for granted and will fulfil my promise. You have be
ing at all times.
ham           I HAVE A DATE ON SUNDAY WITH WILL!!
spam          "XXXMobileMovieClub: To use your credit
ham           Oh k...i'm watching here:)
ham           Eh u remember how 2 spell his name... Yes i did. He v naughty make until i v wet.
ham           Fine if that's the way u feel. That's the way its gota b
ham           "England v Macedonia - dont miss the goals/team news. Txt ur national team to 87077 eg ENGLAND to 87077 Try:WALES
spam          Is that seriously how you spell his name?
ham           I'm going to try for 2 months ha ha only joking
ham           So 1st day first lar... Then when is da stock comin...
```

```
at org.apache.hadoop.hive.cli.CliDriver.executeDriver(CliDriver.java:821)
at org.apache.hadoop.hive.cli.CliDriver.run(CliDriver.java:759)
at org.apache.hadoop.hive.cli.CliDriver.main(CliDriver.java:683)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:498)
at org.apache.hadoop.util.RunJar.run(RunJar.java:323)
at org.apache.hadoop.util.RunJar.main(RunJar.java:236)
FAILED: ParseException line 1:39 cannot recognize input near 'is' 'ham' '<EOF>' in expression specification
hive> select* from sms_scam where Category='ham';
Query ID = radhika_vyas2_20221107224103_04ada162-9622-4e24-9621-1b690339666e
Total jobs = 1
Launching Job 1 out of 1
Tez session was closed. Reopening...
Session re-established.
Session re-established.
Status: Running (Executing on YARN cluster with App id application_1667854260581_0005)

-----
VERTICES    MODE    STATUS  TOTAL  COMPLETED  RUNNING  PENDING  FAILED  KILLED
-----
Map 1 ..... container    SUCCEEDED    1    1    0    0    0    0

VERTICES: 01/01 [=====] 100% ELAPSED TIME: 7.29 s
-----
OK
ham           "Go until jurong point
ham           Ok lar... Joking wif u oni...
ham           U dun say so early hor... U c already then say...
ham           "Nah I don't think he goes to usf
ham           Even my brother is not like to speak with me. They treat me like aids patent.
ham           As per your request 'Melle Melle (Oru Minnaminunginte Nurungu Vettam)' has been set as your callertune for all Callers. Press *9 to c
ham           "I'm gonna be home soon and i don't want to talk about this stuff anymore tonight
ham           I've been searching for the right words to thank you for this breather. I promise i wont take your help for granted and will fulfil m
ing at all times.
ham           I HAVE A DATE ON SUNDAY WITH WILL!!
ham           Oh k...i'm watching here:)
ham           Eh u remember how 2 spell his name... Yes i did. He v naughty make until i v wet.
ham           Fine if that's the way u feel. That's the way its gota b
ham           Is that seriously how you spell his name?
ham           I'm going to try for 2 months ha ha only joking
```