Task 2.1

MAIL FROM: sim.brunet94@gmail.com  
250 < sim.brunet94@gmail.com> is syntactically correct

RCPT TO: sukanya.bhowmik@ipvs.uni-stuttgart.de   
250 < sukanya.bhowmik@ipvs.uni-stuttgart.de > verified  
DATA  
354 Enter message, ending with "." on a line by itself  
Subject: Net-based Applications Exercise

Mime-version: 1.0

Content-Type: text/plain; charset=iso-8859-1

Content-Transfer-Encoding: quoted-printable

Content-Disposition: inline

Hello Sukanya,

do you know how the Umlaut “=E4” and the letter “=DF” are encoded using quoted-printable encoding?

.

250 OK id=177Eix-0004ZY-00

Task 2.2

From: Simon Brunet < sim.brunet94@gmail.com >  
To: sukanya.bhowmik@ipvs.uni-stuttgart.de  
Subject: Net-based Applications Exercise  
Message-ID: <20020520235147.A23513@studi.informatik.uni-stuttgart.de>

Mime-Version: 1.0

Content-Type: multipart/mixed; boundary="17pEHd4RhPHOinZp”

Content-Disposition: inline

--17pEHd4RhPHOinZp

Content-Type: text/plain; charset=ISO 8859-1

Content-Transfer-Encoding: quoted-printable

Content-Disposition: inline

Hello Sukanya,

do you know how the Umlaut “=E4” and the letter “=DF” are encoded using quoted-printable encoding?

--17pEHd4RhPHOinZp  
Content-Type: application/pdf  
Content-Disposition: attachment; filename=”helloworld.pdf”

Content-Transfer-Encoding: base64

JVBERi0xLjQKMSAwIG9iag== … (The first line of every PDF file defines the PDF version. This is the base64 of such line)

Task 2.3

3GJ1bmcgbWFjaHQgZGVuIE1laXN0ZXI=

Becomes

Übung macht den Meister (Practice makes perfect)

Example with the 4 firsts characters 3GJ1 :

- 3,G,J,1 in the base64 encoding are corresponding to the numbers 55,6,9,53

- Now we converts those numbers in bits that are 6 bits long :

55 —> 1 1 0 1 1 1

6 —> 0 0 0 1 1 0

9 —> 0 0 1 0 0 1

53 —> 1 1 0 1 0 1

- Now we concatenate the bits together to have 8 bytes long bits, the group of 4\*6 bits becomes 3\*8 bits :

1 1 0 1 1 1 0 0 // 0 1 1 0 0 0 1 0 // 0 1 1 1 0 1 0 1

- Now ce converts the bits into numbers again :

220 // 98 // 117

- And finally we check the Extended ASCII table to see the corresponding character if there is one :

220 = Ü

98 = b

117 = u

We have the beginning of the word Übung.