#### EXAMPLE FILE FOR MERGETEX

#### PAUL ZINN-JUSTIN

## 1. Introduction

some basic examples:

```
R=QQ[x,y]; factor(x^3-y^3)
res coker vars R
OO_(Proj(R/(x^3-y^3)))^{1,2}
matrix {{1,2},{3,4}}
The code can also be inline: gcd(1300,75). More:
318/46
exp 3.73767
strings and nets:
    "hehe"
    ( "haha123456789"
    || "hoho!@#$%^&*(")
    {oo,ooo}
printing:
    for i from 1 to 3 do print(i^2+ii)
```

## 2. Help

help cohomology

## 3. Packages

packages that have a tex output will work:

```
needsPackage "Posets";
booleanLattice 3
```

## 4. Tricky examples

```
A bunch of complicated cases: a multi-line example

f = i -> (
   -- that's dumb
   i+1
   )

and another weirder one:

I = ideal 0; f = i -> (
   i+1)

finally:
   a=1;b=2;
   c=3;
```

That last one has no output.

#### 5. Reusing output

The output o5 is [Macaulay2 output o5]. The nonexistent output o18 is [Macaulay2 output o18].

6. Inputting from external file

Some more code:

```
-- a test file
R=QQ[x,y,z]
poincare ideal(x^2+y^2,x^3+z^3)
```

# 7. Changing Key/Values

 $\blacksquare$  "some $\sqcup$ weird $\sqcup$ spacing $\sqcup$  $\sqcup$ and $\sqcup$ string $\sqcup$ style"