```latex
1  \documentclass{article}
2  \title{The application of noisy-channel coding techniques to DNA barcoding (Early
   ↪   structure/ideas)}
3  \author{Izaak van Dongen}
4
5  \usepackage{fullpage}
6
7  \usepackage{amsmath}
8  \usepackage{amsfonts}
9  \usepackage{commath}
10
11 \usepackage[nottoc]{tocbibind}
12
13 \usepackage[parfill]{parskip}
14
15 \usepackage[utf8]{inputenc}
16 \usepackage[T1]{fontenc}
17
18 \usepackage[square]{natbib}
19
20 \usepackage{graphicx}
21
22 \graphicspath{ {images/} }
23
24 \usepackage{listings}
25 \usepackage{color}
26
27 \definecolor{codegreen}{rgb}{ 0,0.6,0}
28 \definecolor{codegray}{rgb}{0.5,0.5,0.5}
29 \definecolor{codepurple}{rgb}{0.58,0,0.82}
30 \definecolor{backcolour}{rgb}{0.95,0.95,0.92}
31
32 \lstdefinestyle{mystyle}{
33     backgroundcolor=\color{backcolour},
34     commentstyle=\color{codegreen},
35     keywordstyle=\color{magenta},
36     numberstyle=\tiny\color{codegray},
37     stringstyle=\color{codepurple},
38     basicstyle=\footnotesize,
39     breaklines=true,
40     postbreak=\mbox{\textcolor{red}{$\hookrightarrow$}\space},
41     captionpos=b,
42     keepspaces=true,
43     numbers=left,
44     numbersep=5pt,
45     showspaces=false,
46     showstringspaces=false,
47     showtabs=false,
48     tabsize=2
49 }
```

```
50
51  \lstset{style=mystyle}
52
53  \lstset{
54      literate={~} {$\sim$}{1}
55  }
```

Listing 1: Original preamble, from commit 1bc2c47

```latex
\documentclass[11pt]{article}
\title{The application of noisy-channel coding techniques to DNA barcoding}
\author{\begin{tabular}{rl}
        Name:& Izaak van Dongen\\
        EP Mentor:& Nicolle Mcnaughton\\
        Tutor:& Paul Ingham\\
        Candidate No:&  6659\\
        \end{tabular}
        }

% so the title can be accessed by fancyhdr (and is automatically correctly
% spelled etc)
\makeatletter
\let\thetitle\@title
\makeatother

% fonts
\usepackage[p,osf]{cochineal}
\usepackage[scale=.95,type1]{cabin}
\usepackage[cochineal,bigdelims,cmintegrals,vvarbb]{newtxmath}
% fixed width font with 80 chars per listing line
\usepackage[scaled=.94]{newtxtt}
\usepackage[cal=boondoxo]{mathalfa}

% make the document take up more of the page
\usepackage[margin=1in,headheight=13.6pt]{geometry}

% no paragraph indent
\usepackage[parfill]{parskip}

% custom document header/footer
\usepackage{fancyhdr}
\usepackage{lastpage}

\pagestyle{fancy}
\fancyhf{}
\lhead{\thetitle}
\rhead{Izaak van Dongen}
\rfoot{Page \thepage\ of \pageref{LastPage}}

% pretty table rules and multirow entries
\usepackage{booktabs}
\usepackage{multirow}

% plotting mathematical functions (needs version request)
\usepackage{pgfplots}
\pgfplotsset{compat=1.15}

% \url function and clickable table of contents. no ugly red boxes though
\usepackage[hidelinks]{hyperref}
```

```latex
51
52  % maths symbols and other stuff (supersedes the ams* packages)
53  \usepackage{mathtools}
54
55  % for better table of contents stuff, providing the \listof* commands and not
56  % listing the tables in the table of contents
57  \usepackage[nottoc,notlof,notlot]{tocbibind}
58
59  % more advanced handling of utf8 and fonts or something. apparently good to have
60  \usepackage[utf8]{inputenc}
61  \usepackage[T1]{fontenc}
62
63  % bibliography management with square braces for citations
64  \usepackage[square]{natbib}
65
66  % graphics, like eps files and stuff (supersedes graphics)
67  \usepackage{graphicx}
68
69  % used to horizontally align floats
70  \usepackage{subfig}
71
72  % used for figures
73  \usepackage{float}
74
75  % needed for colouring and stuff (xcolor supersedes color)
76  \usepackage{xcolor}
77
78  \definecolor{codegreen}{rgb}{ 0,0.6,0}
79
80  % listings of code
81  \usepackage{minted}
82  \setminted{breaklines,
83            breakbytokenanywhere,
84            linenos
85  }
86  \usemintedstyle{friendly}
87  % bigger line numbers
88  \renewcommand\theFancyVerbLine{\footnotesize\arabic{FancyVerbLine}}
89
90  % that can break across pages while being captioned figures
91  \usepackage{caption}
92  \newenvironment{longlisting}
93  {\addvspace{\baselineskip}\captionsetup{type=listing}}
94  {\addvspace{\baselineskip}}
95
96  % allow maths to break across pages
97  \allowdisplaybreaks
```

Listing 2: Updated preamble, from commit 6c4c392